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Some Ideas ON OUR SUCCESSORS.

The Presidential Address to the Sheffield Medico-Chirurgical Society, delivered on Oct. 11th, 1923,

BY A. E. NAISH, M.B. CAMB., F.R.C.P. LOND.,
LECTURER ON MEDICINE, UNIVERSITY OF SHEFFIELD; PHYSICIAN, SHEFFIELD ROYAL HOSPITAL.

FOR a moment let us take a bird's-eye view of the changes which have taken place during the medical life of some of us. Much has been said lately in the daily papers and elsewhere of the specialisation that is taking place to-day and the dangers that it brings in its train. Quite as remarkable and significant to my mind is the tendency to unification. When I was a student chemistry was chemistry and physics physics in very much the same way as the East and West of Kipling's famous song, but now the phenomena of adsorption, surface-tension, colloidal states, ionisation, &c., have come in to break down the barrier, and the modern worker in most branches of chemistry finds himself more and more dependent on physical laws and formulæ. In my student days the subjects of electricity and light did not seem to have much to do with one another, but now we conceive ourselves to be surrounded by a medium (æther) in which vibrations with every gradation of wave-length are taking place, and we for the most part are quite unconscious of their presence, although endowed with one sense-organ capable of responding to a few of these vibrations if they come within a tiny range of wave-length. Electricity, X rays, wireless, light, &c., we believe to be of essentially the same nature. I need not point out the close connexion between electricity and chemistry. The ordinary chemical battery and the phenomenon of electro-plating let us have an inkling of this long ago, and the modern theory of the atom bids fair to make both one. Thus physics may be said to be widening out and swallowing up what were previously separate sciences. I think there is a special significance to us as human investigators in this unification of all phenomena. Perhaps I can put my point of view best by means of an analogy from the history of religion. When human beings believe in a large number of separate gods, it is not long before they begin to regard each one with some condescension, to be bargained with, tricked, petted, and cajoled. With the advent of monotheism, the grandeur of the object of veneration tends to give man a proper sense of humility. The greater the unification, the larger and more unexceptional the generalisations, the more man stands in his proper relation as servant to truth.

CHANGES IN OUR VIEWS OF DISEASE.

Turning to more immediately medical subjects, do we see there any sign of this process of unification? If one were asked what is the most significant change which has taken place in our time I think the answer might be that it is not this or that discovery in bacteriology, this or that improvement in surgical skill, this or that new arsenical product or internal gland product or vaccine, but the change which is taking place in our views of disease. In the old days we regarded everything in the light of the anatomical change which it produced in an organ. We labelled our disease: cirrhosis of the liver, valvular disease of the heart, granular kidney, and as long as we knew the microscopical appearances thoroughly were content that we knew all about it. I remember that when, some ten years ago, auricular fibrillation was first used as a diagnostic term, many would ask, "What is its morbid anatomy?" and when the answer was "It has none," would turn away with a pitying smile and not trouble to inquire any further.

If one wants to find out about the habits and mode of life of primitive man there are two methods which can be employed. One is to examine the skulls and other bones that have been left after the ravages of time, any flints or other instruments that have been found in the same geological strata, any habitations or methods of burial of which traces have been left, and from these to construct the story. The second, and better, method is to find a primitive tribe still living, to go and live among its people and to become initiated if possible into all their customs and mysteries, such as has been done by Spencer and Gillen among the aborigines of Australia. This may be called the physiological method in contradistinction to the other or anatomical method. In our student days physiology was a science applicable to the healthy body; as soon as disease supervened one's curiosity was supposed to be satisfied by anatomy. It was, furthermore, a science based almost wholly on animal experiment.

How it Works.

To-day our curiosity is thoroughly aroused on the subject of how disease *works;* we want to take the lid off and see the changes occurring. Furthermore, a large and increasing amount of physiological research is being done on the human body and even on the diseased human body. For determining the rate of the circulation we used to be dependent on deductions from animal experiment. Now more than one method is available for determining it directly from the human subject. We have the means of studying its variations from the normal in various diseases and determining how far the ill-effects are due to such variations. Such estimations are, of course, an essential preliminary to rational therapeutics.

Discoveries about the wonderful properties of the blood for the extremely rapid capture and release of oxygen and CO_2 at each end of the circulation, and the extraordinary mechanism for the provision of sufficient oxygen to the muscles over a wide range of need have been made largely through observations on the living human subject. The same may be said about our present knowledge of the constancy of the blood alkalinity reaction, so exact that a change too small to be detected by our most delicate tests is enough to cause a very obvious alteration in the rate of breathing.

Direct investigation on human beings is only in its infancy, yet we are already beginning to have a much clearer idea of disease processes. For instance, we are beginning to get a conception of the blood delicately balanced, in a state of unstable equilibrium, poised like an acrobat on a tight rope, pushed and pulled by a hundred different forces, swaying first a little to this side and then to that, but retaining a remarkable degree of stability. In disease we can register some of its dangerous swayings, and watch its return to equilibrium. As the "Devil on two sticks" was able to take off the roofs of the houses and see what was going on inside, so our successors will have a clear view of the complicated processes of health and disease. Some cynic or other will say that these successors of ours will no longer be men but machines. Already there is said to be an instrument which will register almost automatically the percentage of gases in the alveolar air, and foolproof sets for the testing of blood-sugar are advertised. Will not the patient of the future enter a kind of Chicago sausage factory, be whirled from one test to another, and be presented at the end with a set of graphs or even one composite graph representing his bill of health, and a table of instructions which will bring him back to, or keep him in, the narrow path of physiological righteousness? Nay, will he not, for the good of the community, be forced willy-nilly to undergo the machines every three or four years? The arch cynic might even suggest that as we have ceased to eliminate the unfit in other ways, the machines might be a very good substitute. Ribald persons are even now heard to suggest that the extraordinarily good surgical statistics at some clinics are due to the preliminary weeding by the tests.

Does not the mind falter and hesitate to go forward to such mechanical triumphs? Should not we rather shoulder our illnesses than be slaves to such a mechanistic life? Samuel Butler in his "Erewhon" pictured a people so much afraid of becoming slaves to their own machines that they abolished them by law, and it was a penal offence even to carry a watch. This is the eternal struggle. Look through history and you will see man constantly devising systems for the economy of time and effort, and constantly becoming entangled in his own rigid creations till some strong thinker or poet comes to release him. The way by which medicine will escape from the dominance of mechanics will perchance be through the altered emphasis that will be put on mental as compared to physical ailments.

The Fetish of the Healthy Body.

At the present time civilised man hardly seems to view in their right perspective the unhappy results of bad bodily and bad mental health. The healthy body has been made a fetish. The daily papers acclaim and exaggerate every slight advance in therapeutics, and paint horrible pictures of disease. They lead people on to think of their livers and hearts and kidneys, and to seek salvation through the extirpation of physical disease. We see the results in a hundred ways. The only son who has been examined again and again for tuberculosis, whose vests are too thick, and who has been stuffed with cod-liver oil and cream. The small "prep." school with its fussy head and matron, where the anxious parents send their supposed delicate boy. The tame doctor to minister to the needs of one family or even one person. The man with the slightly stiff knee surrounded by his clientèle of specialists, nurses, and masseurs. After all, this strong longing for health has been a natural thing in the world hitherto. When small-pox, typhus, cholera, plague, tuberculosis were great mysterious scourges, no wonder that a man wished above all things to have a healthy body.

Now, when one comes to think in broad outline one is struck by the fact that the greater part of human misery is mental, and that the part that bodily ill health plays in its production is over-emphasised. Physical pain and disability are not to be compared in their devastating effects to the mental plagues from which so many in a modern community suffer. So greatly does the unfortunate neurotic dread his mental disturbances that he will court physical pain and disease in an effort to escape from them. We live in a world of men and women potentially capable of far greater things than they actually accomplish, but hampered by the inharmonious or undeveloped working of their central nervous system. We all know the man who, perhaps possessed of fine intellectual qualities, is yet a burden to himself and an ever-widening circle of acquaintances, because he has never learnt to harmonise his conflicting instincts.

THE POWER WITHIN THE BRAIN.

I picture to myself the man of the future seeing far more clearly than we do the terrible waste involved when even one brain fails to realise its potentialities, and demanding of the parson, the doctor, and the schoolmaster that they shall mobilise their forces for the solution of the problem how to realise the best of which each brain is capable. Just where the boundaries between these three professions will be drawn in the future it is impossible to say. They are not likely to remain the same as hitherto. A medical man trained in the method of checking every stage of speculation by direct observation, soaked in the anatomy and physiology of the central nervous system and its development from humble beginnings, is capable of becoming of invaluable assistance in the development of better methods of education. By education I mean, of course, not any narrow school curriculum, but the whole process by which from infancy stimuli are applied to obtain a maximum development of brain function.

Consider, for instance, Head's analysis of cases showing lesions in the neighbourhood of the optic thalamus. Primitive sensations of pain, heat, and cold released from the control of the cortex are felt in an "all or nothing" manner, either intensely painful or not at all. Feelings of disagreeableness such as from scratching the palm with the finger-nail, or from squeezing a part of the body, are imbued with a much more intense feeling of aversion on the affected side, and even stimuli producing emotional sensations such as mournful music could not be borne by some of the patients because of a disagreeable sensation on the affected side only. In this comparatively primitive part of the brain, sensation or emotion is felt in an overpowering "all or nothing" fashion. Thinking over this, we begin to understand how it is that waves of over-mastering emotion will sweep through a primitive or uneducated throng; how it is that the more unreasonable certain likes and dislikes are, the more intense and overwhelming and fundamental they appear to their possessors. Head's analysis of lesions of the cortex showed that no amount of destruction would abolish crude sensation but only the power of comparison; the sense of longer or shorter, hotter or colder, rounder or squarer, thinner or thicker, heavier or lighter, and the comparative position of the limbs in space. We can see at once that such discriminative sensation is at the basis of all comparison of one thing with another, and therefore of all reasoning power. There is no strong driving emotional sensation in the cortex; it is essentially a critical organ.

Emotion Harnessed to Intellect.

Putting together these observations on the cortex and basal nuclei we begin to understand how it is that strong emotions so readily accompany our more indiscriminative and ill-considered actions; why it is that the critical and reasoning faculties seem so often to us hard and dry; how difficult it is to get emotional enthusiasm to irradiate reasonable conduct; why we so often think in one way and act in another, in fact, these different layers of development are probably the explanation of the mental conflict which is so distressing a feature of civilised life.

"Give me the man that is not passion's slave, and I will wear him in my heart's own core; yea in my heart of hearts."

The theme underlying all Shakespeare's great tragedies was the pathos of great character over-borne by an emotion. The truth appears to be that we need emotion as a driving power to carry us along to action, and that the cortex or discriminative part does not possess this of itself, but is dependent on borrowing, so to speak, from a more primitive part. By a process which is technically known as facilitation, or more popularly as habit, the emotion may be got to work more readily with discrimination, but if this connexion is to be at all strong it must be started at a very early age. This linkage of the emotion with the intellect seems to me at the basis of all successful education. The failure of the crammed boy to make a success in after life because his emotions have never been harnessed to his intellect is an instance in point. If by means of early training we can in the majority of human beings make the emotions the servants and stimulators of the intellect, we shall have no need to teach; people will teach themselves; misunderstandings and quarrels between individuals, which are all really irrational, will largely disappear; and mental conflicts will cease to be the scourge that they are at present. The necessity for this junction has, of course, been long recognised by far-sighted individuals. It is what Emerson meant when he said, "Hitch your wagon to a star"; and the process is known to psychologists as sublimation. The medical man, however, with his observations on disease such as those by Head, or his experiments on facilitation such as those by Sherrington, is laying a sound foundation for a science which will deal with education.

THE MEDICAL MAN OF THE FUTURE.

My imaginary medical man of the future will be largely engaged with this most important of all subjects. How far the process of sublimation can be effected in the mass of mankind by means of early

training is a matter which only the future can decide, but the prize is so great that it is worth some seeking. I am myself optimistic. The plasticity of the human brain is its most striking characteristic; it was evolved because it made man capable of fitting himself to any change in his environment. The brain is now being used for very different purposes from those for which it was evolved. The importance of early beginnings is not easily realised by the majority of men. We are apt to think of children in a sentimental, non-rational way. But in most of us the force of public opinion often acts like the proverbial snowball. Looking back on the past 15 or 20 years the altered attitude of people on the subject of infant welfare is amazing. I quote a paragraph from a modern book—

"The causes of the imperfections and ill-health of adult life are now being sought at their source—the mistakes in infancy. The helpless, innocent crying babe, once considered a by-product of obstetrics, has become the centre of a sociological and medical movement such as the world has never known."

Mayhap in another 20 or 50 years the importance of re-digging our mental foundations will be as widely recognised. What is needed as a preliminary to progress is a fuller study of children with regard to their mentalities and the things which are attractive to them at various ages, and the conducting of well-controlled experiments in linking the steps of developing discrimination, based on the guidance of these observations. Educationists are attempting this, but I am insular enough to believe that medicals will in many ways do it much better. The clinician is trained on the individual case, he is less influenced by the artificial rules of the game; to him if the theory does not coincide with the observation, so much the worse for the theory, it must either be patched or scrapped: he is less likely to throw together masses of undigested statistics and draw erroneous conclusions from them; he knows more at first-hand about the interaction of bodily and mental health, and he has a better basis of anatomy, physiology, and embryology to work from.

I quote from a book called "The Making of the Western Mind," a survey of European culture from the time of the Greeks up to the present day, written by two literary men:—

"Medicine is the best example of unquestioned progress due to science, and partly as a cause and partly as a result of this we find medical men the most hopeful of the future and confident of their powers. Their science is the best type of accurate and systematic knowledge applied to the good of man. It has the high merit of encouraging us to expect similar results in political, social, and economic matters and to take steps to secure them."

The Need of Efficient Training in Psychology.

If we are to take our part, and possibly the leading part, in what may be the greatest movement in man's history it behoves us to be up and doing. The present state of a medical man's training in psychology is little short of scandalous. The really efficient general practitioner is a marvel in the development of his psychological sense, and one runs little risk of contradiction in saying that the greater part of the good that he does is by its means. It is an extraordinary advertisement for the benefit of direct learning from nature that a man without possibly a syllable of book psychology should yet be able to attain such skill. But these are the gifted ones in the profession and even they suffer through lack of scientific training, and especially from an inability to generalise, so that the results of their observations die with them. In order that the mass of the profession should participate and that these observations should be available as stepping stones to higher things it is necessary that there should be an educative substructure.

Psychology is a subject which is in vogue at present, especially with the man in the street, and in consequence there is a good deal of rubbish foisted on to the public; but there is a true solid and rapid advance being made, and there is a special need for a critically trained profession to make it their own.

Whether or not we are called upon to take our share in the right development of the growing mind, there is still a huge scope for medicine in the patching and mending of the adult mind. Our attitude towards neurotics in the past has been too much that of the priest and Levite; we diagnose the condition and then pass by on the other side with a shrug of the shoulders and the phrase: "It's only a neurosis. Let's go and look at some interesting organic disease."

My imaginary doctor of the future will reverse the process. With him it will be, "Oh, this is only an organic disease, just run him through the machines; but here's an interesting neurosis: did you ever meet with such a remarkable combination of phobias?" At present there is nearly always the feeling at the back of our minds that it is the patient's own fault that he is in this state of mind. Approaching him like this we are bound to make him feel humiliated. To destroy his self-respect is the very worst treatment for a neurotic; seven other devils worse than the first will enter him if we are successful. But we seldom are, because the patient's own defiance or negativism, as it is technically called, is aroused, and we find ourselves without influence. "That doctor didn't understand my complaint" is what is said as soon as our back is turned.

The French proverb—"To understand everything is to forgive everything"—may be considered as a prophecy that, in the future, a narrow morality will be superseded by a more truly scientific method of dealing with mental twists. Moral disapprobation—making people feel ashamed of acts which are not for the benefit of the community—is the strongest weapon which society has been able to wield hitherto for the coercion of the individual, but there are signs that it is now being regarded as not very well fitted to our needs, and, in many instances, as cruel and ineffectual; liable, in some cases, to lead to hypocrisy and subterfuge, in others to defiance and a sense of injustice. Medicals are particularly liable to be struck by the injustice of its action. They see an epileptic who in the normal course of his life is honest and law-abiding, but who for certain periods before or after a fit, or even independently of a fit, becomes a liar, a thief, or even a murderer. They see a person with heart disease, who has been placid and affectionate, become irritable, unruly, and impossible to live with. They see a dipsomaniac or sexual pervert in whose case there is a clear family history of the same disease. Application of one universal panacea of moral indignation reinforced by criminal proceedings leads largely to concealment and aggravation.

"*Erewhon.*"

Samuel Butler in "Erewhon" satirises the indiscriminate application of such a crude remedy by making the inhabitants of that country reverse our own procedure with regard to physical and mental aberrations.

"In that country if any man falls into ill-health, or catches any disorder, or fails bodily in any way before he is 70 years old, he is tried before a jury of his countrymen, and if convicted is held up to public scorn, and sentenced more or less severely as the case may be. There are subdivisions of illnesses into crimes and misdemeanours as with offences amongst ourselves—a man being punished very heavily for serious illness, while failure of eyes or hearing in one over 65, who has had good health hitherto, is dealt with by fine only, or imprisonment in default of payment. But if a man forges a cheque, or sets his house on fire, or robs with violence from the person, or does any other such things as are criminal in our own country, he is either taken to a hospital and tended most carefully at the public expense or if he is in good circumstances, he lets it be known to all his friends that he is suffering from a severe fit of immorality just as we do when we are ill, and they come and visit him with great solicitude, and inquire with interest how it all came about, what symptoms first showed themselves, and so forth—questions which he will answer with perfect unreserve; for bad conduct, though considered no less deplorable than illness with ourselves, and as unquestionably indicating something seriously wrong with the individual who misbehaves, is nevertheless held to be the result of either pre-natal or post-natal misfortune.

"The fact that the Erewhonians attach none of that guilt to crime that they do to physical ailments, does not

prevent the more selfish among them from neglecting a friend who has robbed a bank, for instance, till he has fully recovered; but it does prevent them from even thinking of treating criminals with that contemptuous tone which would seem to say, 'If I were you, I should be a better man than you are,' a tone which is held quite reasonable in regard to physical ailment. Hence, though they conceal ill-health by every cunning and hypocrisy and artifice which they can devise, they are quite open about the most flagrant mental disease, should they happen to exist, which to do the people justice is not often. Indeed, there are some who are, so to speak, spiritual valetudinarians, and who make themselves exceedingly ridiculous by their nervous supposition that they are wicked, while they are very tolerable people all the time.

"They send for the Straightener at once whenever they have been guilty of anything seriously flagitious—often even if they think that they are on the point of committing it; and though his remedies are sometimes exceedingly painful, involving close confinement for weeks, and in some cases the most cruel physical tortures, I never heard of a reasonable Erewhonian refusing to do what his Straightener told him, any more than of a reasonable Englishman refusing to undergo even the most frightful operation, if his doctors told him it was necessary."

He thus makes fun of the doctor who refuses to deal with anything outside the physical sphere:—

"I heard of one lady, who had the hardihood to confess that a furious outbreak of ill-humour and extravagant fancies for which she was seeking advice was possibly the result of indisposition. 'You should resist that,' said the Straightener in a kind but grave voice; 'we can do nothing for the bodies of our patients; such matters are beyond our province, and I desire that I may hear no further particulars.' The lady burst into tears, and promised faithfully that she would never be unwell again."

There is little doubt that medical men will have to be called in to take their part in questions involving moral conduct, and that their part will be that of investigation, and the choice of the most suitable remedies. Already in a few cities a considerable proportion of the juvenile offenders are referred by the magistrates to a medical man with special experience, in order that their mental calibre may be assessed, and appropriate treatment advised. In a few large prisons the medical officer is specially chosen to perform a similar function. Unfortunately, the paucity of the means of treatment at present available largely handicaps their efforts. The worst cases can be placed in an institution for the mentally defective; for the rest there is little else than the Borstal system. With the advent of a real and whole-hearted determination to deal scientifically with mental aberration the crude remedy of moral disapprobation will slowly disappear, and then our patients will no longer fear to expose their weaknesses in the early and incipient stages. The basis of truth underlying the Freudian theory appears to me to be dependent on this rough and harmful action of the moral conventions on the integration of the brain processes.

EUGENICS AND THE SUPERMAN.

What will be our attitude in the future with regard to heredity and eugenics? The profession as a whole takes very little interest in these subjects at present, but the man in the street a great deal. Is it right that we, who have to advise on the production of children, and of healthy children, should take no concern in the production of wise children? Accumulation of the results of mental tests on school-children is making it clear that heredity is an enormous factor in mental capacity. The uncritical man tends to jump to the conclusion that we can breed a race of supermen. There is a great deal of talk bandied about at present, that we take much trouble to breed good horses, dogs, sheep, and cattle, but allow human beings to mate at random. There is a probable source of fallacy in this argument. We breed our animals for single qualities such as strength, speed, large milk-supply, thick wool, or a faculty for retrieving. The human brain is an immensely complicated combination of different qualities and dependent for its success on the balance between them. It may be that there is a high correlation between these qualities, but we must not take this for granted. It is unlikely that for a long time to come we shall have sufficient knowledge to be able to control, even in any rude fashion, the factors that go to the making of a superman. A tiny nation with a population about equal to that of Portsmouth produced in about 200 years as much genius as the whole of the rest of the world in the whole of the rest of time. What went to the making of this people?—a rude, war-like, hunting northman from the forests of Central Europe, and a savage, superstitious, revengeful man living on the shores of the Ægean. Who would have thought it? The miracle has not yet repeated itself. The number of permutations and combinations is too great for a repetition in so short a space as 2400 years.

Then, too, the production of a stable nation is dependent probably on a considerable variation between the brains of its individuals. This enormously complicates the problem. There seems to me little chance of this kind of eugenics coming into the realm of practical politics in the near future. I hope our successors will have taken up the question before long; its importance and difficulty do not need emphasis.

Such questions as whether sterilisation of mentally defective persons can eliminate the condition are really medical. Medical indifference has led to clever logicians throughout the country advocating legislation for this purpose. A very little thought shows that high expectations will be disappointed. If mental deficiency is inherited as a Mendelian recessive, as is claimed, the number of persons showing the condition is very small compared to those that carry it in their germ cells. Last year I took the trouble to work out the length of time it would take to reduce the condition nearly to extermination point by the sterilisation method, even supposing that all cases were hereditary and no fresh cases arose by mutation. I found it ran into thousands of years. Subsequently I found that in 1917 Punnett had worked out the same thing from the U.S.A. figures. He showed that if the proportion of Mendelian heritable mental deficiency is 3 per 1000 of the population, it would require 250 generations, or 8000 years, to reduce it to 1 in 100,000 by the method of sterilising those who show the character.

There are many possible avenues open to the medical profession in the future. We most of us like to indulge our fancies at times, and a little speculation helps us to be ready to take up with forethought our ever altering duties.

The Principles of SYMPTOMATOLOGY:

AN INTRODUCTION TO A NEW OUTLOOK IN MEDICINE.

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IN THREE PARTS.—PART II.

In Part I. (THE LANCET, *Nov. 3rd*) *there was outlined the general problem of ill-health and the new outlook in its respect. The principle of the "reflex arc" was explained.*

4. THE LAW OF FLUCTUATION.

I have already mentioned that in trying to use the principle of the reflex arc it was some time before we found out how to apply it in practice. When it occurred to us that the best way was to proceed by resolving the arc into its component parts, we sought for instances where it could be applied. In this endeavour we used two methods, first by seeking the simpler forms of disease where not only the agents but the reactions could be recognised, and second, by taking instances where the unit of the arc whose disturbance produced the symptom could be recognised.

In seeking for the reactions easy of recognition, we only followed the practice of the physiologist who takes the simplest reactions, as the nerve-muscle preparation, to find the evidence of the most important laws which govern the production of vital phenomena. The occurrence of conjunctivitis following upon the lodging of a foreign body in the cornea was an opportunity of studying the principles of symptom production. The lacrymation, the blepharospasm, the injected capillaries, were recognised as being but the increased activity of normal reflexes; there was no new factor introduced. At the same time pain was felt, and it was reasonable to suppose that pain was produced in the same way—by increased activity of the organs normally regulating the function of the eye. From this way of looking at the matter, sensations are produced by the same process as the other symptoms—i.e., an increased stimulation is conveyed to the effector organs (lacrymal gland and muscles of the eyelid and the sensorium) and they respond by increased activity (lacrymation, blepharospasm, pain). A similar series of events occur in vomiting. Tickling the fauces may produce the sensation of nausea, a flow of saliva, then the act of vomiting. Here again the sensation of nausea was produced in the same way as the increased flow of saliva and vomiting. Hitherto, sensations have been looked upon as something distinct from objective signs, but a fuller knowledge of the reflex shows that they all belong to the same category of vital processes.

Another organ for observation that lies to our hand is the skin, and a number of extremely important deductions of universal application resulted from the more accurate investigation of skin sensations. We found that under ordinary conditions the sensibility of the skin varied in a remarkable manner. Areas of the skin may become hyperalgesic as a result of nerve injury, disease of the spinal cord, or from visceral disease. In my graduation thesis which was published in THE LANCET in 1883 [1] I described a case of hemiparaplegia spinalis in which there was an area of cutaneous hyperalgesia. The border of this area was not sharply defined, there being a region between the normal areas and hyperalgesic areas, where the sensibility may vary remarkably. Small areas were at one time extremely sensitive to touch and to pain stimuli, while other areas were insensitive. After a few minutes the former areas were no longer sensitive, while the insensitive areas have become sensitive. Further observation in cutaneous hyperalgesia in lesions of the nerves, in herpes zoster and in visceral disease revealed the same phenomenon. In our recent investigations the sensations of heat and cold in the normal skin were found to vary in the same way. These sensations are usually described as occurring in "spots." It was found that while there are spots that are sensitive to heat and cold, and spots that are insensitive, after a time these sensitive spots are no longer sensitive, while the insensitive spots become sensitive. These results have been described by Prof. Waterston.[2] [3]

In some people the skin has a mottled appearance, particularly in the legs or arms of the young. The mottling is due to pale patches mixed with patches of a darker hue. If one of these patches be surrounded by a line of ink, it will be found after a few minutes that the dark patch has become pale and the pale patch dark. In these dark patches the venules and capillaries were dilated, while in the pale patches they were contracted. From this we inferred that the capillary field was continually passing into a state of dilatation and contraction and vice versa. This variation in the sensations of the skin and in the capillaries we called "fluctuation," and led us to seek for its evidence elsewhere and we found that it is a phenomenon present in every organ which consists of active cells.

[1] THE LANCET, 1883, i., 995, 1040.
[2] The Sensations of the Skin, D. Waterston. Report of the St. Andrews Institute for Clinical Research, 1922, vol. i.
[3] The Activities of the Skin for Touch and Temperature, D. Waterston. Brain, 1923, vol. xlvi., Part 2.

As we proceeded in the inquiry we found that it was impossible for us to understand the nature of the regulating process without a fuller knowledge of this matter, and Prof. Herring [4] has dealt fully with it elsewhere. The recognition of this law has compelled a closer inquiry into the function of cells, the result of which it is necessary to describe.

5. THE CELL.

There is a fairly common belief that for clinical medicine a superficial knowledge of physiology is all that is required, and that an accurate knowledge of details is only necessary for what is called scientific investigation in the laboratory. This is a mistake. The phenomena with which clinical medicine deals are far more subtle and more difficult to detect than the phenomena with which the physiologist deals. The disturbances which lead to the production of symptoms are often but the slightest departure from the normal, and are produced by agents far more delicate than those employed by laboratory experiment, while the result (or symptom) is so subtle as to be often beyond the capacity of a physiological instrument to register, though capable of recognition by appropriate clinical methods. The application of the principle of the reflex arc requires a knowledge of cell function of an intimate kind, and although the matter is dealt with in physiological text-books, it may not be amiss to recapitulate some of the main features of cell activity, and to dwell upon some features that have not received that attention which is their due.

The Excitability of the Cell.

All the special functions of fully-developed cells are to be found in a rudimentary state in the primitive cell. Many seemingly diverse functions proceed from the same root function—these root functions having become modified to suit a particular purpose, which the fully-developed cell has to fulfil. As a consequence, we find many terms used to describe processes which are fundamentally identical. A living cell takes in nourishment, and alters it so that it is transformed into different forms of energy, which, when discharged, appear as the specialised function of the cell, as contraction, secretion, conduction, perception of sensation, stimulus production, &c. The discharge takes place in response to a stimulus from without, so that the cell is excitable or capable of being stimulated. The susceptibility to stimulation varies, so that at one time a cell may respond to a relatively weak stimulus, at other times it may respond only to a much stronger stimulus, or there are times when it does not respond to any form of stimulation.

These variations in excitability are dependent on the nutrition of the cell. When the cell is fully stored with energy it is "excitable," that is, it is susceptible to a weak stimulus. When it has discharged its energy it is incapable of further effort till the store of energy is replenished, so that during the time it is discharging energy, and until some energy is restored, it is incapable of further activity, and so cannot respond to any form of stimulation. As its store is being replenished it becomes capable of discharging energy, and becomes more excitable. With the increase in the store excitability increases and the amount of energy discharged is also increased, so that a weak stimulus produces a maximum effect.

The conversion of food into the different forms of energy is chemical or metabolic, and can be accelerated or retarded by various agencies. The simplest agents are heat and cold. Alteration in the constituents of the cell as by food, drugs, secretion of glands, toxins of disease, and nerve influence (vagus and sympathetic) affects the cell like heat and cold. Many terms are applied to the varying phases of these functions, as excitability, inexcitability, refractory period, latent period, raising and lowering the threshold of stimulation, "all or nothing," inhibi-

[4] The Law of Fluctuation or of Alternating Periods of Activity and Rest in Living Tissue, P. T. Herring. Brain, 1923, vol. xlvi., Part 2.

tion, &c. It is to be remarked that all the vital processes concerned in the maintenance of life and the healthy activity of organs are dependent upon these primitive functions of the cell. Further, all the phenomena of ill-health, and death itself, are produced by a disturbance of these processes, and in one or other of the two ways indicated—an increase or decrease in excitability.

Impulse Production.

Among the specific functions of cells there are two which have not received that consideration which their importance requires—impulse production and control. Every cell when it discharges its function throws out at the same time impulses which affect neighbouring cells. The effect of their impulse can sometimes be demonstrated by the reactions which they produce on other organs. They may also be detected by delicate electrical instruments, as on the passage of an impulse along a nerve, or on the contraction of muscle. While these impulses may be expressed as an alteration in the electric potential, or in other ways, they nevertheless play an important part by their effect upon the process that regulates the function, not only of the organ whose cells produce the impulse, but also of those organs with whom they are related through the nervous system, or in other ways. We have studied some of the effects produced by impulses which are generated by the contraction of muscle cells, and some of our results will be discussed later, but there is reason to suppose that the generation of these impulses is not peculiar to muscle cells. This function of impulse production becomes the chief function of certain organs, as the sino-auricular node of the heart. In the cells of the node are generated the impulses which cause the contraction of the heart. In the same way among the functions of the higher centre in the brain is that of generating and discharging impulses such as those that cause the contraction of voluntary muscles.

Control.

Another somewhat vague influence exerted by certain structures is that of "control." I am quite aware that such a term, used as I use it, is unsatisfactory, and it is quite possible that the phenomena I attribute to this cause can be explained in other terms, but its use in a specific way calls attention to some important agencies at work, and though we may recognise their effects, we cannot clearly understand how the effects are brought about. While the most evident example is the control exercised by the will, as in modifying the rate of breathing and other instances, and which is called "inhibition," there are evidences of the presence of control independent of the will. In experimenting on the motor reflexes, Sherrington had to decerebrate the animal—that is, remove it from control of the cerebrum. In testing the knee-jerk, the reflex is said to be "reinforced" if the patient's attention is fixed, that is, if the control of the cerebral cortex is removed.

The principle that the function of an organ is not fully understood until it is lost applies to this control. When a motor nerve to a voluntary muscle is cut, the muscle is no longer under the control of the nerve, so that it cannot be made to contract voluntarily or reflexly, but it does not lie inert, but passes into a state of fibrillatory activity. Even when the control of the nerve is temporarily suspended the muscle may pass into this state, which disappears at once when the nerve resumes control. A similar effect is seen in the heart. When the sino-auricular node ceases to act the muscle fibres of the auricle pass into fibrillary activity. But more than that happens, for when the dominance of the S.-A. node is suspended the ventricular action becomes affected in a peculiar manner; its contraction becomes often incomplete, it becomes much more susceptible to stimulus by agents which increase or decrease its rate, and is often productive of extreme failure of the circulation. The recognition of this has opened a new phase in cardiology.

The Functional Part of the Cell.

We are accustomed to speak of the special function of a cell as if it were the cell body which determines its peculiar function. While this is true in regard to muscle and secretory cells, it is not true in regard to many neurones. While all neurones have the power of conducting impulses, in some there may be a part endowed with other specific functions. These may be in parts far removed from the cell body. Efferent neurones, like the sympathetic and vagus, have a specific influence on effector organs. This specific influence is not a property of the cell body, but lies in the terminal branches of the nerve fibre (F, Fig. 1). This is shown by the result obtained in stimulating these nerves when they are cut; the characteristic effect is produced by stimulating the peripheral end—that is, when it is separated from the cell body.

In afferent neurones the characteristic function is a property of the peripheral branches of the nerve fibre in what is called the "receptor" (A, Fig. 1). The specific sensation of touch, heat, and cold are due to the peculiarity of their receptor branches. The significance of this constitution of an afferent neurone will be discussed in the study of the afferent nervous system.

6. THE AFFERENT NERVOUS SYSTEM.

The importance of the afferent nervous system in maintaining health and in the production of symptoms is not sufficiently recognised, while it is not realised how little is known of this portion of the nervous system. This lack of knowledge constitutes one of the main reasons for the failure to understand the processes concerned in the production of symptoms. So far our knowledge of the afferent system is mainly limited to the nerves concerned in sensation, and these form but a small part of this system, but they have bulked so largely that it has been assumed that they constitute the chief part of the system, so that all afferent nerves are spoken of as "sensory." The employment of this term has been unfortunate, for although in physiology it is often used as synonymous with "afferent," yet its use has led to a great deal of confusion in other fields.

As our investigation proceeds we obtain evidences of this afferent system in all parts of the body. The autonomic nervous system is spoken of as "an efferent system," and yet there is every reason for assuming that there is also an "afferent" system as large and as important in the maintenance of life as the efferent. As the special functional peculiarity of the afferent nerve lies in the receptor end of the neurone (A, Fig. 1), if the nerve be cut stimulation of either cut end does not call forth its special function. Thus, it would be futile to seek for the special function of a cutaneous sensory nerve for the sense of touch, heat, and cold by stimulating either cut end of the nerve. It is true the stimulation of the central end might cause a muscle contraction, but it would not produce these sensations, which reveal the function of the nerve. So it is in regard to the afferent nerves of the autonomic system—stimulating the cut ends cannot reveal their peculiar function. Although the receptor part of the afferent nerve is not usually capable of demonstration, yet the evidence of its presence is beyond dispute. It has been shown in our investigation on skin sensation that a specialised receptor for the stimulus which gives rise to the sensations of touch, heat, and cold cannot be recognised, yet when the skin is damaged the receptor is damaged along with it, and these sensations cannot be reproduced by any form of stimulation.

As we proceed in our inquiry the presence and peculiar function of receptors in the viscera become more and more apparent. The difference between the stimulation of a nerve by means of its receptor and its cut end can be seen in the case of the phrenic nerve. If the peripheral end of a cut nerve be electrically stimulated, or if it be laid over the heart, the same result follows, a sudden short contraction of the diaphragm. When, however, the phrenic nerve is

stimulated in the normal act of breathing—that is, by impulses sent in from the periphery by afferent nerves to the respiratory centre—the contraction of the diaphragm is slow and gradual. It must be clearly recognised that a great many afferent nerves have receptors which serve other purposes than sensation. It may be taken for granted that every structure which is endowed with functional activity is supplied with both afferent and efferent nerve fibres. For the stimulation of the afferent receptors an adequate stimulus is required. Those which are concerned in the production of sensation require a particular kind of stimulus; those concerned in other functions require also a particular stimulus.

This difference can be shown by applying a mechanical stimulus to the different tissues of the body. Touch, pinching, pricking, burning, heat, and cold give rise to definite sensations applied to the skin, but when applied to other tissues they may yield no sensation. Thus, one may prick with a pin the skin around the anus and produce pain, but if the pricking be continued into the mucous membrane of the bowel no sensation results. Indeed, most of the viscera can be handled, cut, torn, and burnt, and no sensation be produced. Yet we know that from some of these viscera impulses may be conveyed into the central nervous system which result in a great many manifestations, including pain. The inference from this is that just as a particular kind of stimulus is required to affect the skin receptors, so a particular kind of stimulus is required to affect the receptors of the afferent nerves of the viscera. As the stimulus cannot be a mechanical one, it must be due to some vital process.

The organs of the healthy body are continually subject to a stream of impulses which enter from without, or are produced in the body by the activity of the organs themselves. These impulses, wherever they arise, are conveyed by the nervous system to the organs and modify their functional activity. These impulses have a far wider effect than is realised. This can be shown in many ways. The stroking of the skin under the breast by a rough cloth produces a variety of effects besides the sensation of touch, as the production of a localised goose-skin, and of a widespread goose-skin, which appears on the chest and down the inner side of the arm. This may be accompanied by a sensation of chilliness, due, in all probability, to a contraction of the capillaries of the skin over the same region as that in which the goose-skin appeared. In addition, there may be a dilatation of the pupil. Such phenomena are evidences of effects produced in the central nervous system by a slight stimulation of the skin. As we pursued our inquiry we found this spreading of impulses in the central nervous system was the occasion of the production of a great many symptoms in organs widely separated, as nausea, vomiting, sweating, pallor, and pain, as in renal colic.

Our inquiry then proceeds to find out what vital processes are adequate to excite the receptors. Many phenomena are produced by visceral disease which are dependent for their production on stimulation of the afferent nerves. In certain states of ill-health careful examination of the abdomen reveals the presence of hard and contracted muscles, and of areas of tenderness, due to a hyperalgesic state of the skin and deeper tissues of the external body wall. These phenomena indicate the presence of some disease process in the abdominal organs. Other phenomena often accompany these signs or appear without them, as nausea and vomiting, increased pulse-rate, pallor, sweating, pain, &c. All these phenomena indicate increased activity of the afferent nervous system, and indicate further the presence of some particular stimulus which is capable of acting upon the receptors of afferent nerves.

It has seemed to us that there are only a few factors which are capable of producing this adequate stimulus, and in our research we are as yet able only to identify one—viz., impulses arising from the contraction of muscles.

7. The Generation of Impulses.

It is a matter commonly accepted that all the organs are linked together in such a way that one organ reacts upon the other through the nervous system. This has just been exemplified in describing the widespread effects resulting from a local stimulus from the skin and ureter. The generated impulses in one organ are taken up by the receptors of the afferent nerves and conveyed into the central nervous system and through it to the efferent nerves of the effector organs. While such an explanation is accepted, little is known of these impulses or how to investigate them. It is admitted that there is a continuous inflow of impulses from the skin and special sense organs—that indeed consciousness is dependent upon this. While this is recognised, we know little of the manner in which these impulses affect the organism. We think only of the brain, but almost certainly every organ of the body reacts to these impulses. It has just been pointed out that impulses from the skin gave rise, not only to the sensation of touch, but to a widespread goose-skin and dilatation of the pupil. These are in all probability only a few of the reactions that were produced. If it be considered how such stimulation arises from the skin with every movement of the body which causes the slightest friction, while impressions are also sent in from all the sense organs, we obtain a glimpse of the manner in which the function of organs may be influenced.

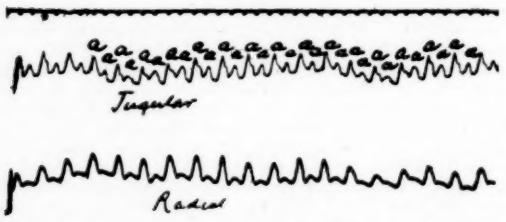
In addition to the impulses from without there are the impulses that arise in the organs themselves, which react upon one another. In the description of the function of the individual cell it was pointed out that in addition to its peculiar function it also had the faculty of throwing out impulses. These can affect the receptors of afferent nerves. Such impulses are not always easy of detection, not because the evidence of their presence is absent, but because it has not been understood how to link up the evidences with the parts concerned in the production of the impulses.

The impulses produced by muscle-cell activity are the easiest to demonstrate. One evidence has already been quoted in the experiment when the peripheral end of a cut phrenic nerve is laid over the heart. Impulses from the contracting ventricle stimulate the nerve, and these are conveyed to the diaphragm which results in a contraction, so that the diaphragm contracts regularly with each ventricular systole. It is these impulses produced by the contraction of muscle cells which give rise to the characteristic electric reaction of the electrocardiogram. In the condition called auricular flutter weak beats occur which can be counted. They frequently occur at the rate of 300 per minute. Lying in the wall of the auricle and exposed to these impulses is the auriculo-ventricular node. Stimulation of this node results in a contraction of the ventricle, so that we can count the number of impulses generated in the auricle by the rate of the pulse. At times the ventricle responds to every auricular impulse—more often it responds to every second. The reason for this is that the A.-V. node does not recover rapidly enough to be susceptible to every impulse from the auricle. This is represented in Fig. 5, which is a tracing of the auricular waves in the jugular (*a*), and of the radial pulse taken at the same time. The explanation of the tracing is given in the diagram Fig. 6. Here the auricular contractions are represented by the down strokes in the space AS—while the ventricular contractions (radial pulse) are represented by the down-strokes in the space VS. It will be seen that the auricular systoles are exactly double the ventricular. The space A.-V. represents the auriculo-ventricular node, and the shaded parts represent the period after its excitation when it cannot respond to a stimulus. It will be seen that every alternate auricular systole falls during this shaded period and its transmission to the ventricle is blocked by the refractory A.-V. node. The next auricular systole falls at a time

when the excitability of the A.-V. node has returned, and so it transmits the impulse to the ventricle.

From these observations the conclusion was drawn that muscle cells when they function not only produce their peculiar effect, such as contraction, but also produce impulses capable of stimulating other cells. When this conclusion was arrived at the question arose, how this could be demonstrated?

FIG. 5.



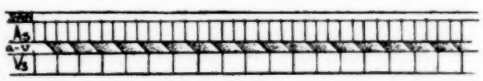
Tracings of the jugular and radial pulses during auricular flutter. The waves, *a*, are due to the auricle and are at the rate of 300 per minute. The alternation in the size of these waves is due to one beat of the auricle falling during ventricular systole, giving rise to the larger waves, and the other beat falling during the ventricular diastole. The rate of the radial pulse is 150, exactly half the auricular rate. The reason for this is shown in the diagram Fig. 6.

At first we bewailed the absence of delicate electric recording instruments, then we reflected that in the living body were means probably more sensitive, and we set about to find some way of demonstrating their presence. For a long time the mechanism of the increased heart rate in response to effort has been a puzzle, and it occurred to us to see if impulses from contraction of muscles could cause it. A continuous record was taken of the pulse of a man when he was lying on his back. After the rate had settled down he was asked to contract the muscles of his calf. Although it is at first difficult to do this without contracting other muscles of the body and holding the breath, with a little practice it can be done. When these muscles are contracted the rate of the heart begins at once to increase, and the increased rate continues for a short period after they are relaxed.

Fig. 7 shows this result. The signal x shows the time the muscles began to contract. The increase in rate begins with the second beat, and it lasted for four beats after the contraction had ceased. The rate rose from 60 beats per minute to 80. This is a fairly typical response—as it has been suggested that in making a voluntary effort, impulses from the cortex might affect the vagus, we sought for muscular effort which occurs independent of volition, and we took a number of observations on women in labour. On observing the onset of a uterine contraction before pain is felt and before the patient holds her breath or "bears down," the heart-rate increases. This is seen even in the early and slighter contractions, when the patient does not hold her breath.

There are, no doubt, other factors concerned in maintaining the increase in rate during effort, but it is evident that the earliest is due to the contraction of the muscles, and some of these other factors may be the result of stimulation from the same source—an inference which is justified from the spread which occurs on stimulating the skin and in renal colic. What we are concerned with here is to establish the

FIG. 6.



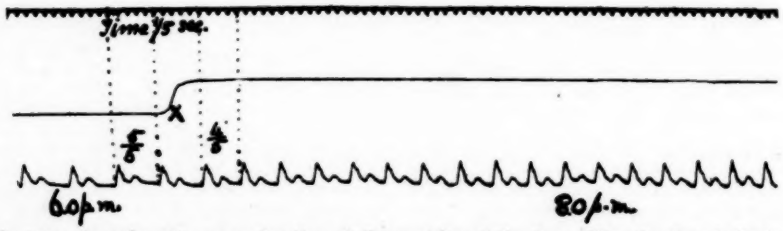
The diagram of the events shown in Fig. 5. The upper space S.-A. N. represents the sino-auricular node which is out of action (compare Fig. 8). The downstrokes in space A.-S. represent the auricular beats at the rate of 300 per minute. The space A.-V. represents the A.-V. node. The shading represents the period when the node is not susceptible to stimulation. It will be seen that every second beat falls during this period, and there is in consequence no response by the ventricle. The downstrokes in V.-S. represent ventricular systoles as shown by the radial pulse in Fig. 5. They are half the rate of the auricular systoles. This diagram, like that in Fig. 8, illustrates the principle of the reflex arc in that it brings out where the disturbance occurs which results in an abnormal rhythm of the heart.

fact that, when a muscle cell contracts, impulses arise which are capable of stimulating afferent nerves.

In Sherrington's discussion of visceral sensation[5] he points out that the receptors of afferent nerves are adapted to particular stimuli. "Adaptation has evolved a mechanism for which one kind of stimuli is the appropriate, *that is, the adequate stimulus.*" He goes on to point out that while mechanical stimuli as cutting, burning, &c., cause no sensation, certain forms of mechanical stimuli may do so, such as *distensile* stimuli. But distensile stimuli are only adequate provided they cause a contraction of muscle. One of the most powerful stimuli for contraction is stretching of the muscle fibres, as can be readily shown by giving a distending enema.

Muscle contraction is used here as an example because it provides such unmistakable evidence of the generation of impulses, but there is little doubt that every active cell produces them, although they are difficult to prove in the healthy body. In diseased states, however, symptoms are provoked which can only be explained in this way. In such diseases as gastric ulcer, appendicitis, the muscles of the abdominal wall may become rigidly contracted, and the skin and deeper tissues become hyperalgesic. It is quite justifiable to draw the conclusion that these phenomena are the result of impulses which arise in the diseased organ, and which are conveyed to the central nervous system in the manner described in the diagram, Fig. 2.

FIG. 7.



Showing the increase in pulse-rate on contraction of the muscles of the leg. The signal x indicates the time of contraction. The rate increased from 60 beats per minute to 80, and began after the first beat (from five-fifths of a second to four-fifths per beat) and lasted for a few beats after the contraction had ceased.

[5] The Integrative Action of the Nervous System, p. 12. C. S. Sherrington. 1906.

GYNÆCOLOGY AND GENERAL MEDICINE:

THE RELATION BETWEEN CERTAIN DISORDERS OF THE FEMALE PELVIC ORGANS AND SYMPTOMS ORDINARILY CONSIDERED THE PROVINCE OF THE PHYSICIAN.[1]

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THE science and art of medicine form a subject so vast in range that no one mind can compass it in the brief span of life allowed. Most of us are specialists to a greater or less extent, concentrating on one or other of the many branches of medicine and producing by mass-action the world of medicine as a whole. If the advantages of specialism are manifest, so also are the disadvantages, for compartmental study (as we venture to call it) is very cramping to the mental outlook, tending to direct it to the part rather than the whole. It is only through general physicians that the assembled results of specialists are rendered of the greatest possible service to the patient. We regard the general physician as a liaison officer whose function is to correlate, harmonise, and dovetail the views of the specialists. We have heard it stated that the general physician, if not already "extinct," will very soon be crowded out of existence by the ever-multiplying horde of specialists. As one of us belongs to this threatened race he begs to protest that he is more necessary than ever.

The subject of this paper is the relation between certain disorders of the female pelvic organs and symptoms ordinarily considered the province of the physician, and we have introduced it because, unfortunately, there still exist among us physicians who never make a vaginal examination and gynæcologists whose conceptions end at the brim of the pelvis.

Early Conception of Gynæcology.

Gynæcology began as a department of medicine. This is well seen by the fact that it was recently incumbent on those aspiring to take up this specialty that they should become Members of the Royal College of Physicians of London. It has now become a branch of pure surgery, no doubt to its great advantage, and yet with a certain loss. Text-books on diseases of women, written upwards of 50 years ago, devote as much space to the consideration of symptoms collaterally affecting the body as a whole as to those directly located in the genital organs. Such terms as "sympathetic" and "reflex" which were applied to these symptoms when viewed in the light of to-day's knowledge, appear to be cloaks for ignorance, and as gynæcology became surgical they caused the reality of the symptoms themselves to be denied or ascribed to the vagaries of feminine mentality. It was Huxley who pointed out that one of the commonest errors is to discredit a truth because the arguments used in its favour are bad. The old writers were not wrong. Symptoms referable to the intestines, heart, lungs, and body generally may be primarily due to a disorder of the genital apparatus, not sympathetically nor reflexly, but by the agency of toxic absorption or bacterial action, conditions of which our forefathers knew nothing, or, as we will show later, to some alteration in the anatomical conditions of the pelvic floor, the consequences of which they failed to recognise.

We do not propose to waste your time by describing the effects on the general health that grossly patent diseases of the female genitals, such as advanced carcinoma or heavily bleeding fibroids, obviously produce, but to draw your attention to certain clinical states that ordinarily would not be suspected of having a gynæcological origin. For example, we have found intestinal stasis, genito-urinary infections, arthritis, fibrocytis, sciatica, choroiditis, neuro-retinitis, cyclitis, all directly resulting from a gynæcological lesion and all relieved by attention to the local condition.

[1] A paper read before the Section of Obstetrics and Gynæcology of the Royal Society of Medicine, Nov. 1st, 1923.

Weakened Pelvic Floor.

Let us take for our first consideration the effects of a weakened pelvic floor, perhaps the disorder where treatment gives the most gratifying results. These may be intestinal stasis (which in its turn gives rise to dilatation of the bowel, with a facility for the absorption of toxins); displacement of the uterus (which may again lead to intestinal stasis, the result of obstructive constipation); rectocele (and, as will be seen later, possibly prolapse of the rectum); and cystocele (with its risk of infection of the genito-urinary tract, giving rise to symptoms which may pass unrecognised). Of these, intestinal stasis is by far the commonest, and has the most serious effect on the patient. It is much more common in women than in men, a fact immediately suggesting that the peculiarities of the female pelvis may play a large part in the production of the condition.

We proceed, therefore, to consider the several factors involved in the process of defæcation in a woman, and the results produced when these factors become weakened or inoperative. The factors involved in the act of defæcation are: (*a*) the muscular contraction of the wall of the bowel; (*b*) the rise in intra-abdominal pressure produced by straining; (*c*) the contraction of the fibres of the levatores ani, whereby not only is the pelvic floor prevented from bulging downwards under the increased abdominal pressure, but the anal canal is pulled over the advancing fæces.

(*a*) *Contraction of the Bowel Wall.*—The ease with which a motion is expelled depends upon the relation between the power applied and the resistance encountered. Given a sufficiently vigorous contraction of the bowel wall, a very large motion can be expelled by that force alone, the power being sufficient to overcome the resistance of the sphincter even against the individual's will and in spite of voluntary rigid tightening of the pelvic floor in the endeavour to prevent the action. This effect of a violent aperient is common knowledge. When from any reason the motion is liquid the expulsion of the bowel contents by the bowel musculature alone is still easier since the resistance is much less.

(*b*) *Rise in Intra-Abdominal Pressure, Produced by Straining.*—Normally, however, defæcation is not accomplished by contraction of the bowel wall alone, but is aided by voluntary straining, the abdominal muscles and diaphragm contracting so as to compress the abdominal contents. This expressional force acts on the rectum chiefly by the medium of Douglas's pouch, which forms a pneumatic wedge compressing the rectum against the rigid sacrum behind. We have no means of seeing what changes occur in the disposition of the parts during such straining, but judging from what is seen during an abdomino-pelvic operation when, from faulty anæsthesia or some other cause, the patient commences to strain, one infers that coils of the small intestine are crowded down into the utero-rectal space (always supposing the uterus is normally anteverted) and that these coils transmit the pressure to the rectum. That such pressure is merely auxiliary to the contraction of the bowel wall is, however, manifest when one considers what violent straining is required to pass a solid motion in the complete absence of peristalsis, though a semi-liquid stool is expressed easily enough. The poor development of the circular muscle fibres of the rectum (excepting at the sphincter), as compared with the longitudinal muscle fibres, suggests that constrictive peristalsis probably ends at the junction of the colon with the rectum, the contents of the rectum being expelled by *vis a tergo* of the constrictive peristalsis of the colon above, and the pneumatic pressure of Douglas's pouch, the longitudinal fibres of the rectum in the meantime making rigid its wall and pulling the anus over the fæces.

(*c*) *Muscular Pelvic Floor.*—The muscles of the pelvic floor and the levatores ani in particular play an important part in defæcation. In the first place their contraction opposes a resistance to the downward pressure of the diaphragm and abdominal muscles which the act of straining produces, so that the abdominal pressure rises and the pneumatic wedge of Douglas's pouch becomes effective. If the pelvic floor were composed of easily stretched material instead of muscles capable of considerable rigidity, it would simply bulge under the pressure. In this event not only would the abdominal pressure fail, but the whole of the pelvic viscera, rectum included, would be pushed down en masse with the pelvic floor to which they are attached. Such a happening would mean a breakdown of the whole mechanism of defæcation, the essential of which is that the fæces alone should descend, leaving the rectum and the other pelvic viscera in situ. The levatores ani have a dual action on the rectum. The anterior fibres (or pubo-coccygeus) when contracting draw the anus towards the subpubic angle, narrow the vaginal entrance by lateral compression, and make rigid the front part of the muscular pelvic floor. The posterior fibres (ischio-coccygeus) tend to open the anus and draw it over the advancing fæcal mass, whilst at the same time they make rigid the posterior part of the muscular floor. This rigidity anchors the rectum, not only because the levator fibres have a direct attachment to the bowel, but because the lateral ligaments of the rectum are attached to the fascia covering the upper surface of the levators. Thus the normal act of defæcation is accomplished. Now let us consider what occurs when the main factors in defæcation are weakened or inoperative.

Importance of Douglas's Pouch.

It is a fact that all operations involving obliteration of Douglas's pouch are followed by obstinate constipation. The radical abdominal operation for cancer of the cervix is the best example of this. It is also true that all conditions which, by adhesions, inflammatory exudate, tumour formation, or displacement, cause the utero-rectal pouch to disappear, are similarly accompanied by constipation, always providing that the condition does not at the same time produce actual irritation of the bowel. It has frequently been stated that the presence of tumours or the retroflexed body of the uterus in Douglas's pouch causes constipation by direct pressure on the bowel wall. If the tumour or uterine body be big enough, direct obstruction in greater or less degree does occur, but we believe that the main reason for the constipation which characterises these cases is that the pneumatic wedge of Douglas's pouch has ceased to exist, owing to the filling up of the space by the tumour or uterus, as the case may be. What happens is well seen if, in the course of an abdominal operation on a patient whose uterus is lying back in Douglas's pouch, the patient begins to strain. The intestinal coils are then thrust forward in front of the uterus, entirely obscuring it, whilst the irritable surgeon, vainly endeavouring to dam them back, damns the anæsthetist instead.

Hence the loss of the pneumatic wedge of Douglas's pouch produces a form of constipation in which there is difficulty in expelling the fæces from the rectum unless the deficient expressive force is made up for by the increased peristalsis of the bowel wall and greater fluidity of the motions, to obtain which the patient habitually employs aperients. When the retroverted uterus is large it actually acts like a ball-valve, pushing upon and actually hampering the bowel behind it, and the same is true of tumours closely fitting the utero-rectal space. In this class of case primary dilatation of the pelvic colon is produced, with results which we will consider presently.

We might notice here an instructive case of this variety of abnormality; the patient consulted one of us early in the year. She was unmarried, aged 33, and gave a history of loose stools for a period of over three years, at times the actions amounting to urgent diarrhœa, with a previous history of marked constipation. The condition was always worse at the time of the periods. Menstruation was regular, but was always associated with pain the first day. X rays, bacterial and other examinations failed to reveal any abnormality except a markedly retroflexed and enlarged uterus. The abdomen was opened by the other of us, a careful examination was made, but nothing further was found. The round ligaments were shortened. She has been seen recently, the bowels are acting regularly every day, the general condition is vastly improved, and her weight is steadily going up.

Production of Cystocele and Rectocele.

Now let us consider some further effects of a weakened pelvic floor. In women whose muscular pelvic floor has been stretched by childbirth it is the anterior part of that floor (the pubo-coccygeal segment) which is chiefly weakened, so that the defective levators cannot properly close the pelvic outlet in front, a gap remaining where the much enlarged vagina passes between them. It is well recognised that the degree of dropping of the anterior and posterior walls respectively is unequal, one or the other being chiefly or solely affected. We suggest that the inequality can be, in part at least, explained by the position of the uterus, the tendency to cystocele being greater when the uterus is retroflexed, and the tendency to rectocele greater when the uterus is anteverted. In cases of retroversion the altered direction of the pneumatic wedge by the body of the uterus filling Douglas's pouch forces down the bladder and the ledge on which it rests. This ledge is formed by the cardinal vaginal ligaments (Mackendrodt's ligaments) on either side, with the anterior vaginal wall and pubo-cervical muscle sheet in the centre. On the other hand, with the uterus anteverted the pressure is directed on to the posterior part of the floor (the ischio-coccygeal segment) to which the lower end of the rectum is attached, and as this, as a rule, escapes injury, every act of straining pushes the rectum downwards and forwards in the direction of least resistance, and the outcome is a rectocele. If the posterior part of the pelvic floor were more weakened than the anterior part, the rectum would then be pushed straight downwards instead of downwards and forwards, and this in fact is what happens in those cases in which the rectum prolapses through the anus.

An interesting case of this type was seen over a year ago. The patient came to consult one of us on account of prolapse of the rectum. Pelvic examination showed a marked dropping of the pelvic floor. Anterior and posterior colporrhaphy was performed, the uterus was then ventrofixed and the front of the rectum stitched to the posterior wall of the uterus. Since that time there has been no return of the prolapse, and the patient's general condition is entirely satisfactory.

The downward and forward movement that produces a rectocele drags on and loosens the attachment of the rectum to the sacrum and stretches the lateral rectal ligaments, and this movement, carried out against the resistance of the attachments named, presently permanently stretches and thins the wall of the bowel itself, so that it becomes functionally weaker. That the bulge of a rectocele is due to the actual descent of the bowel, and not to flatus or fæces pressed into the primarily thinned and weakened viscus by the act of straining, can be demonstrated by passing a rubber tube into the rectum and then making the patient strain down. It will be found that the size of the rectocele capable of being protruded is not lessened by the presence of the tube, though a free way exists for the escape of fæces or flatus. Descent of the rectum is often accompanied by an elongation downwards of Douglas's pouch, but a moment's consideration shows that this will not make up for the rectal deficiency, for the pneumatic wedge presses forward towards the gap between the levators, and not downwards and backwards as it should do.

The bulged, elongated and thinned condition of the rectum thus produced results in a form of constipation where, though solid fæces may be driven by peristalsis into the rectum, they are unable to be expressed from the anus with any ordinary exercise of force, because the resultant of pressure is in the wrong direction, and because the bowel and fæces descend together as the patient strains. Patients suffering from this disability complain they have lost their expressive power, and they resort to the habitual use of aperients which, by increasing peristalsis and fluidising the fæces, temporarily at all events abrogates the difficulty. The pathological process, however, is a progressive one, the laxity of the parts increasing with every effort made, and the distended and thinned condition of the bowel tending to extend upwards until the pelvic colon and, later on, the rest of the large bowel may be dilated. It is possible that we have here a cause for diverticulitis, so much commoner in women than in men.

In a considerable portion of these women the uterus is retroverted and low in the pelvis in addition, with the results already described—namely, that the pressure of the intestinal coils when straining is diverted forwards into the utero-vesical space and the pneumatic wedge of Douglas's pouch is lost. Thus the difficulty in emptying the lower bowel is increased, and where the uterus is large enough to act like a ball-valve, hampering the bowel behind it, extension to the pelvic colon of the lax condition already affecting the rectum is much assisted, and a thinned and dilated pelvic colon, sooner or later, is certain to result.

Permanent dilatation of any portion of gut having a mesentery necessitates permanent increase in size of the mesentery, not only as measured along the mesenteric edge, but as measured from its root to its edge. In the case of the pelvic colon this elongation is accentuated if the uterus is retroverted, on account of the fact that a large free space becomes available in front of the uterus, into which the coil of gut prolapses, and the mesenteric "drag" thus produced is continually tending to accentuate the deformity. In this class of patient, too, the abdominal wall is usually lax as well, and there is general enteroptosis. So that all the conditions for intestinal stasis are present. In such patients a vicious circle exists, the primary defect in the pelvis being accentuated by the ill-health and tissue-weakness produced by the stasis originating from the pelvic deformity. Like other vicious circles, it is often difficult to determine the starting-point of the cycle, and in these cases, unless a vaginal examination be made, it will probably be overlooked.

Clinical Features of Stasis of Pelvic Origin.

At the outset patients may be divided into two groups: (1) those who frankly complain of pain or discomfort in the pelvis (these invariably consult the gynæcologist); and (2) a much larger class, those whose symptoms do not at first suggest anything wrong in that region, and who directly consult a physician. We will discuss the second of these two groups, for professional opinion up to now has not associated the symptoms with pelvic abnormalities. Most of these patients complain of obstinate constipation, and they usually describe the condition as one in which they have no longer the muscle-power necessary to expel the stool. Others complain of "feeling so weak," that they are all right so long as they are lying down, but that they tire on slight exertion and are disinclined to make any prolonged effort. An inquiry may elicit that their disability dates from a confinement, previous to which they were normally active and strong. They say that they "don't feel the same as they used to do," and in fact they *have* been physically altered by the labour. They are as a house whose foundations have subsided, the very basis of the support of the viscera having yielded. Patients of this sort, with a total absence of localising symptoms, are commonly treated by tonics, rest, general massage and so forth, the underlying cause of the complaint of general weakness being entirely overlooked because nothing directly points to the genital organs. More commonly, however, the patient has grown so accustomed to inactivity in her bowels that this is not her chief complaint on consulting a physician. She even conveys to the physician by her answers that nothing that he can suggest will relieve that except the taking of aperients, a matter in which she is a greater expert than he is, and that it is merely the penalty of having children. Rather she seeks aid for indigestion, or even heart disease.

Complaint of "Heart Disease."

It may come as a surprise to the gynæcologist that he may be of assistance in a case of heart disease. One must explain at once that when a patient consults a physician stating she has heart disease it is an extremely uncommon thing to find any organic disease. Usually some type of arrthymia is found, and this, from the sensations associated with it, has suggested the diagnosis of heart disease to the uninitiated. A commonly accepted cause for this condition is flatulent distension of the stomach, but a distended splenic flexure of the colon may produce the same result. Now we have already seen that this may be part of the disorganisation produced by a weakened pelvic floor, and in the repair of this anatomical derangement the gynæcological surgeon can relieve the patient of her cardiac symptoms.

A case of this type consulted one of us some years ago. She came complaining of "heart disease," palpitation on the least exertion, associated with a certain amount of dyspnœa. She was a woman of 42, and had had four children. Examination revealed a dilated splenic flexure and descending colon. An inquiry elicited the fact that she had lost the muscular effort to evacuate the stools, and that the bowels were not moved without a strong purgative. Vaginal examination showed a great laxity of the pelvic floor, with the uterus anteverted. An operation was advised for the repair of the vagina and perineum and this was done. She has been seen again recently, and her history since the operation has been one of a normally functioning heart. This type of "heart disease," due to pelvic derangement, is not at all uncommon, and unless one is on the look-out for it, it can be easily missed.

Complaint of "Indigestion."

It is more usual, however, for the patient to complain simply of indigestion, due to a condition of flatulent distension of the abdomen, much worse after food. The stasis we have described is accompanied by dilatation of the colon with a consequent partial loss of peristalsis, and it is to this that most of the symptoms complained of are directly due. Again, stasis without doubt produces an alteration in the flora of the intestinal tract, both in quality and quantity, and this, together with the thinned and altered condition of the bowel, leads to toxic absorption, and in some cases to bacterial transmission. We do not propose to spend time discussing the effects of absorption or transmission, but would point out that the indigestion, headaches, and general ill-being which singly or in conjunction are complained of by these patients at first sight bear no relation to the genital organs, and yet may be directly responsible.

We believe that the findings of those who have written on stasis are not the only explanations for its existence, and that when a woman consults a doctor for symptoms apparently due to stasis, a vaginal examination should be made before the already accepted causes are held responsible for the condition. Headaches, general debility, indigestion, and so forth are too often treated as entities by the physician, but we maintain that in many female patients they are merely signs, and that the original cause is displacement of the genital organs and pelvic floor, and that, until this is corrected, complete and permanent cure of the symptoms will not be achieved.

Patients of the type we have been describing invariably consult a physician and not a gynæcologist, and unless the former proposes to make a vaginal examination, and is willing to make liaison with the gynæcologist, the patient is unlikely to be benefited to any great extent.

We have thus seen that a weakened pelvic floor may be held accountable for, or may result in, intestinal stasis, dilatation of the bowel, possibly diverticulitis, and general toxæmia, which latter is so often treated as neurasthenia without the origin of the condition having been discovered. Further, patients suffering from cystocele do not primarily consult a physician, and yet this disorder may cause conditions with which it is the duty of the physician to deal. It may, if at all marked, lead to partial retention of urine, as the patient is unable with the act of micturition completely to empty the bladder; these patients, in order to prevent a too early return of the desire to micturate, press during micturition the anterior wall of the vagina upwards with the finger, and so accomplish a complete evacuation of the bladder. Thus a condition of partial retention really exists very much like what is found in the male suffering from an enlarged prostate. It is well recognised how easily this urine in the male may become infected, and in a similar way, more easily owing to the shortness of the urethra, infections may arise in the bladder of patients suffering from cystocele.

The gross infections causing acute cystitis are easily recognised, as the patient seeks the aid of the physician for this condition. But in many the condition is not acute and causes no local symptoms, but gives rise to disorders elsewhere. The clinical aspects vary according to the infecting organism. The chronic infections with *Bacillus coli*, the typhoid group and pyocyaneus, may cause no frequency of micturition or pain to the patient, but may be responsible for chronic ill-health, debility, and a general feeling of malaise. The same symptoms may be directly due to a chronic streptococcal infection, again without localising symptoms, but in addition there may be symptoms of affections in joints and muscles.[2]

Undoubtedly these infections may be conveyed to the bladder by the urethra, and as this is so, an examination should be made of the vagina, as vaginal discharges are only too commonly the cause. These may come from a torn cervix. Cervicitis may give rise, in itself, to a marked toxæmia, and it has been in our experience to find arthritis arising from this condition. These toxic conditions usually clear up with local treatment to the affected part, and in the cases of arthritis it may be necessary to repair the injured cervix, and in addition we have found vaccines very helpful.

A case illustrating the importance of a complete pelvic examination, and carrying with it a salutary lesson, might usefully be inserted here. A very advanced case of arthritis consulted one of us a year ago. Both knee-joints were seriously affected, and the small joints of the hand showed a considerable amount of deformity. When seen the patient had already had all her teeth out, and her tonsils had been removed and the intestinal flora investigated, but so far she had obtained no relief. Vaginal examination showed a fairly marked cystocele and a torn cervix. No vaginal discharge was detected at this examination. A catheter examination was taken, and the urine showed a pure streptococcal growth. The patient underwent a course of vaccine treatment with this organism over a period of about four months with very satisfactory results. It was then discontinued, but two months later the symptoms recurred, when she came to consult one of us again. This time a vaginal examination showed a heavy discharge coming from the cervix. On inquiry it was elicited that the recurrence of the symptoms synchronised with the appearance of this discharge. A culture was taken from it and also from the urine, and in both a streptococcal infection was found. A fresh vaccine was prepared, and this is giving eminently satisfactory results.

In this case there is little doubt that the bladder infection was only secondary to the cervical, and had the latter been properly investigated the patient would have been saved a great deal of suffering.

[2] It should be noted that some of the most active organisms causing general symptoms may not appear on the plate even up to ten days' incubation, and it is wise to continue the incubation of tubes that appear sterile at the end of the second day.

Other Gynæcological Conditions.

Chronic infections of the tubes cause very marked symptoms of toxæmia, and again arthritis may have its origin here, particularly when the infection is gonococcal. Ovarian troubles do not give rise commonly to general conditions outside the pelvis, and when they do the local trouble is the condition for which the patient asks for relief, but small cysts, fibromata, or malignant growths may give rise to symptoms from pressure, and in the early days of these conditions the pressure symptoms are frequently the only thing of which the patient complains. During the last few years we have seen several cases of distressing sciatica in young unmarried girls. In none of these had a vaginal examination been made, and so an impacted dermoid cyst had, in each case, escaped observation. On removal of this tumour all signs of sciatica disappeared. This cannot but strengthen our claim that a pelvic examination is necessary to complete one's investigations, whether the patient be a virgin or a married woman.

Infections of the eye may even come within the sphere of the gynæcologist, and it has been our privilege to see a case of neuro-retinitis cured and another of choroiditis in which the condition was completely arrested by dealing with the site of infection in the pelvis. One case was sent to consult one of us by Mr. Ernest Clarke, on account of severe attacks of pain in the head which occurred five or six times a day, and were associated with partial blindness. He reported it as a case of neuro-retinitis, with hæmorrhages. Every site for a possible infection was explored, and finally a catheter specimen of the urine was examined as a cystocele was present. This was found to contain pus cells and epithelial cells, mostly from the renal pelvis, and a fairly heavy growth of streptococci. A vaccine was used over a period of nearly five months, and in the end the retina became normal, and she recovered her sight completely. The other case, a patient of Dr. A. M. Elliot's, was one of choroiditis, which had already destroyed the sight of one eye, associated with a severe cervical tear with a purulent streptococcal discharge. A total hysterectomy was performed and the result was a complete arrest of the condition, and up till this time there has been no return.

Before closing let us revert again to intestinal stasis. A perfectly legitimate query may here be interposed—namely, how our conclusions have been arrived at. The answer is as follows. One of us (McC.), as a result of his experience of cases of chronic constipation and intestinal stasis, had become aware of the existence of a distinct class of patient in whom the most exhaustive examination revealed nothing except deformity of the genital organs and pelvic floor. Careful consideration of these cases led him tentatively to the conclusions just set forth, and determining to put it to the test of operative intervention, he discussed the matter with the other of us (V. B.), whom he found had formed certain definite views which bore on the subject. Of these the importance of Douglas's pouch and the muscular pelvic floor in the mechanism of defæcation, and the physical results that follow if they become inoperative, have already been mentioned. He further had noted that the operation of shortening the round ligaments, when performed so that the organ is not merely anteverted but pulled high up as well, effected an unlooked-for improvement in symptoms due to enteroptosis when that condition complicated retroversion, and he had ascribed that improvement to the uterus and broad ligaments forming a firm platform, so to speak, on which the intestines could rest.

The physician's views were therefore put to the test, and in a series of cases the pelvic deformity was repaired with the definite object of curing the stasis. The operations performed differed in different cases according to the nature and extent of the deformity. If the uterus was retroverted, the round ligaments were shortened by a method which virtually suspends the uterus on either side at its junction with the round ligament, but which leaves the corpus itself free. Laxity of the pelvic floor was dealt with by a colporrhaphy which included very firm and thorough suture of the levatores.

The result of these operations has been so happy as to convince us that the conclusions theoretically reached are right. The most satisfactory results of all have been in women whose pelvic floor had been thoroughly deranged, but cases of simple backward displacement of the uterus have also given markedly good results. The sense of well-being after these operations have been safely accomplished is the outstanding feature in the records of all the patients; in fact, there is no class of operation in surgery that we know of where the patients themselves are so grateful. It is because of this that we determined to bring this type of case before the section. The subject up to now has scarcely been touched upon, the only writing bearing on it that we know of being contained in Arthur Hurst's book on constipation, in which weakness of the pelvic floor is specifically referred to as a cause of constipation. We do not claim that the last word is said on the subject, nor that our explanations or conclusions may not be modified by future experience and observation, but we do believe that in the main our contention is right.

In conclusion, we trust we have shown that general conditions may be dependent on pathological lesions in the pelvic organs and have proved the necessity of a pelvic examination to be a part of the general examination made by the physician, and we trust we have thus succeeded in bringing more closely together those great fields of thought—namely, general medicine and gynæcology.

UNSUSPECTED NASAL SINUS DISEASE.

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NASAL sinus disease is much more common than is generally recognised, the reason being that the nose does not receive the attention it deserves. It is quite common to see patients suffering from sinus suppuration whose symptoms date back 5, 10, or even 20 years. Their symptoms and signs of nasal disease are often slight. Probably the patient has had treatment on one or more occasions; a nasal wash has been prescribed and used without much improvement in his condition, and he comes to regard the latter as "chronic" and resigns himself to what he thinks is the inevitable.

Capacity of the Nasal Sinuses.

Although the signs of a chronic sinusitis may be slight, the condition is very serious. The size of the nasal sinuses is apt to be forgotten among the mass of anatomical knowledge the student has to learn. A brief outline of their measurements may help in the appreciation of their importance.

—	Dimensions in centimetres.		
	Frontal.	Maxillary.	Sphenoidal.
Antero-posterior ..	2·1	3·8	2·1
Supero-inferior ..	3·4	3·8	2·2
Lateral	2·3	2·3	1·8

The frontals and sphenoidals vary very greatly in size. One may be immensely larger than the other, much bigger or much smaller than the average quoted. The cubic content as given by Loeb[1] shows this very strikingly.

—	Content in cubic centimetres.	
	Greatest.	Least.
Sphenoid	11·8	0·6
Frontal	8·2	0·9
Maxillary	28·4	4·6

The ethmoids, of course, are much smaller in size but make up for this in their greater number. The maxillary antra are the most constant. Their shape and dimensions may be well compared to a Brazil nut of moderate size. With this idea of the capacity of the nasal sinuses one can visualise what happens when one or more of these cavities are infected. They are constantly secreting pus, a good deal of which is swallowed. The toxins are absorbed both by the mucosa of the sinus and of the intestinal tract; a chronic toxæmia is produced, which may show itself in many ways—e.g., headaches, arthritis, or nephritis. The pus swallowed may set up infection at any point in the intestinal canal, producing tonsillitis, gastritis, appendicitis, colitis, &c. The toxins may produce effects further afield, such as optic neuritis, arteriosclerosis, arthritis, &c. Acute otitis and tonsillitis are obvious conditions that may arise from pus passing down the posterior nares.

The recognition of a possible focus in nasal sinuses is of great practical importance. Treatment of the secondary conditions produced by sinus suppuration will produce little benefit while the toxic source is still present. Surgical treatment of the sinuses gives excellent results. In cases of fairly recent antral disease puncture and lavage will often effect a cure. Even in long-standing cases and when more than one sinus is involved the appropriate radical drainage operation gives most satisfactory results. Early diagnosis is thus of very great importance.

The following series of cases shows how the signs of sinus disease may be masked or referred to a remote part of the body.

The Onset of Acute Sinusitis.

Visualise for a moment the onset of an acute sinusitis following coryza. The normal mucous membrane of the nose is sterile. The skin and vibrissæ of the vestibule of the nose are septic. Very interesting experiments to prove this were done some years ago by StClair Thomson and Hewlett.[2] All day long the nasal mucosa of the town-dweller is bombarded by bacilli of various kinds, which impinge on the moist surface of the septum and turbinal bones. Here they have to contend with the defensive mechanism of the nose—the antiseptic action of the nasal secretion, the excellent blood-supply of the nose, and the mechanical action of the ciliated epithelium. Usually the defence succeeds. Occasionally, however, owing to the number or virulence of the attacking organisms or to a lack of vigour in the defending mechanism, the attack gains a foothold; a resulting rhinitis spreads through the ostia connecting the nose with the various sinuses. The inflamed mucosa secretes muco-pus, which overflows into the nose. The ostia become narrowed through the swelling of the covering mucous membrane. This tends to partial damming up of the secretions, causing acute headache, pyrexia, and toxæmia. As a rule these symptoms pass off in a few days with suitable treatment, and the sinusitis clears up. Occasionally, however, perhaps in 5 per cent. of cases, the invading organisms gain a permanent stance. A subacute or chronic sinusitis is the result.

A nasal infection secondary to influenza, scarlet fever, or any of the infective diseases may cause a sinusitis in a somewhat similar way. A distinct class of cases are those caused by dental sepsis. These, of course, are, in the first place at any rate, limited to the antra and comprise about 20 per cent. of chronic antral disease. The sinusitis having passed through the acute stage to the chronic may show little or no

signs of its presence. But there it remains as a septic focus ready to flare on provocation, and a source of infection to other parts of the body. To realise the possibility of its existence will elucidate many obscure conditions.

Illustrative Cases.

The following cases are examples of illness in which there was a sinusitis present, the existence of which would not have been detected unless routine examination had been made.

Acute Otitis Media.—A single woman, aged 10, came to me on Dec. 12th, 1922, with a history of acute otitis with pain and discharge from right ear for one week. No previous attacks. The membrane showed the typical red, swollen appearance of acute otitis, and a perforation in lower half. In spite of a month's treatment and myringotomy the ear still discharged profusely. No obvious source of sepsis in mouth or throat. She gave a history of catching frequent colds—a history that often points to sinus infection. On exploring the antra I found the right full of muco-pus. After four irrigations the nose cleared up completely. The ear improved at the same time and was quite dry on Jan. 18th, 1923.

In this case it is quite probable that the pus from the antrum was the original cause of the otitis. The pus passing down the posterior nares might easily infect the Eustachian tube. At all events the septic antrum aggravated the otitis, which resisted all treatment until the septic focus in the nose was eliminated.

One frequently sees in children an otorrhœa resisting all treatment while septic adenoids are present. After removal of the adenoids the otorrhœa clears up. A septic sinus can act in the same way. Although not so common, it should not be forgotten as a possible cause.

Bad Breadth.—A girl, aged 19, came to the Guildford Hospital on Nov. 2nd, 1922. Her only symptom was "bad breath." She had no headaches or pain, complained of no nasal discharge, and in fact felt perfectly well. She was a domestic servant; the fœtor from her breath was a great handicap to her in her work, and had been a source of distress to her in social life for over three years. Puncture of the left antrum yielded creamy fœtid pus. Treatment by irrigation failed to cure, so I did a radical Caldwell-Luc operation. After a week she was practically well, and has had no trace of "bad breath" since. Previous to coming to hospital this girl had been treated for "dry" catarrh of the nose. Probably the case had been diagnosed as ozæna. A glance at the interior of the nose should have negatived this diagnosis. Also the girl was acutely conscious of her own bad breath. The fœtor was both subjective and objective. In ozæna it is objective only.

Cases of "bad breath" are frequently put down to bad teeth, "disordered stomach," constipation, &c. A septic mouth is, indeed, frequently the cause, but where the mouth is clean the nose is probably the source. It is exceptional to find bad breath as the only symptom of sinus disease. It is usually found combined with discharge, headache, and ill-health.

Perpetual Colds.—A man, aged 59, seen Jan. 2nd, 1923, complained of a "perpetual cold" affecting both sides of his nose. Symptoms dated back five years but could not be traced to any illness. No headache or tenderness; sight and sense of smell good; no fœtor detected from the discharge, although he volunteered that instead of handkerchiefs he used old pieces of linen which could be burned. Anterior rhinoscopy showed a typical picture of chronic sinusitis. On the right side a mucous polypus blocked the view; on the left side the anterior end of the middle turbinal was outlined in pus, the "creamy crescent" I like to call it, which tells of pus in the anterior group of nasal sinuses. Proof puncture on both sides yielded fœtid creamy pus which mixed readily with the irrigating fluid. This miscible pus always indicates old-standing disease. The probability is that such a case will not clear up with puncture combined with injection of antiseptic. The case required a radical drainage operation—a double Caldwell-Luc operation with removal of the ethmoid cells on the right side.

Vaccines are quite useless in these chronic cases. The mucous membrane is degenerated. The blood of the vaccinated patient, although it may have much added antitoxin and increased antibodies, does not reach the organisms in the septic pool and does not circulate efficiently in the degenerated mucosa. In the acute and subacute cases, however, vaccine is no doubt of help in treatment, although it is often difficult to judge on this point, as the patient is rapidly getting better by the time the vaccine is ready for use.

Head Injury.—A carman, aged 20, sent to Guildford Hospital on Dec. 13th, 1922, as a case of head injury, possibly with cerebral hæmorrhage. A week previous to admission the door of his van had struck him on the left fronto-parietal region. He was dazed by the blow, but resumed work next day, although his head ached and was tender to touch. Two days after the accident his nose bled; headache became very severe—intense boring pain round left eye prevented sleep. On admission he was mentally quite clear; his chief complaint was of the headache, and he was tender over the left malar and frontal regions. Temp. 99° to 100° F. Mr. Milligan, the house surgeon, noticed a nasal discharge on left side. Mr. H. B. Butler, the surgeon in charge of the case, asked me to see the patient. I found an acute purulent sinusitis on left side with typical creamy crescent. Turbinal bones showed extreme engorgement, completely blocking the nose on that side. Puncture of left antrum yielded creamy pus. After lavage pus could still be traced coming down from ethmoidal area, indicating infection of anterior ethmoidal cells. X ray examination showed left antrum and left ethmoid opaque—but frontal sinuses clear. Pus from antrum yielded staphylococcus from which a vaccine was made and given. With treatment he gradually improved; it took over a month to get the nose free from pus. In fact, I had put him down for a drainage operation when he showed a sudden improvement and the sinuses cleared up completely. His symptoms, headache, tenderness, and fever had disappeared after ten days of treatment. On questioning him it was found that he had had a "cold" for a month previous to his head injury. Whether the blow had any exciting influence on the sinusitis it is hard to say. Probably not.

The moral is that here we have a case sent in by a most competent doctor as a possible cerebral hæmorrhage. This case might easily have been trephined had not the possibility of coexisting sinus infection occurred to the surgeon in charge.

Duodenal Ulcer.—A woman, aged 39, admitted to Royal Surrey County Hospital, Guildford, for recurring gastro-duodenal symptoms for some years, suggesting a duodenal ulcer. She was referred to me for preliminary treatment on Nov. 9th, 1922, when I enucleated the tonsils. On seeing her again I found pus in the left nostril and got a history of nasal discharge for over a year, and frontal headaches "as if there was something drawing her eyes." Exploration of the left antrum yielded creamy pus mixing with the irrigating fluid. On Feb. 16th, 1923, a laparotomy was done by Mr. E. W. Sheaf, who found no ulcer in stomach or duodenum.

Sir Berkeley Moynihan, in his Hunterian lecture[3] delivered on Jan. 29th, 1923, on Some Problems of Gastric and Duodenal Ulcers, says: "Before treatment begins a general survey of the patient must be made, especially in reference to the existence of sources of infection in the mouth and the accessory sinuses." The above case well illustrates this point. If the infection sources can be eliminated early enough the gastritis will clear up before the ulcerative stage is reached.

Pyrexia.—A boy, aged 9, had an attack of "influenza," with some tonsillitis and nasal catarrh. These symptoms cleared up, but the temperature persisted. For three weeks it kept up to 103°, 104°, and even 105° F. in the evening. No cause whatever could be found for the fever. He felt, slept, and ate well; he was seen by four doctors and carefully examined, and the doctor in charge finally asked me to examine the sinuses. Both antra contained pus. A double drainage operation was done. The temperature fell by lysis to normal in a few days. Another interesting point about this case is that the boy had developed albuminuria. This also disappeared three days after the operation. This case I have published in a previous paper,[4] but I mention it again as being unique in my experience.

One of the commonest symptoms of chronic sinusitis is headache. This is most commonly frontal. In acute maxillary, ethmoidal, and frontal cases it is a brow-ache. In chronic cases the pain is higher. Occipital headache points more to sphenoidal sinus. The headache is usually matutinal; the patient wakes with a dull pain which lasts for some hours, until by the help of the upright position, drainage and other factors such as blowing or washing out the nose, the pent-up secretions are partly evacuated, thus relieving

tension. Headache may be the *only* symptom of chronic sinusitis, as the following case and many others show.

Headache.—A girl, aged 17, had suffered for seven years from headaches of supra-orbital type generally on the left side. No other symptom than almost continuous headache. Transillumination showed dullness on left antral region. Lavage of left antrum discovered an empyema of fœtid pus. After the second lavage headaches entirely ceased. She is still under treatment as the antrum is not yet free from pus. A drainage operation may be required.

The contents of the antrum may be a clear straw-coloured sterile fluid which gushes out when the trocar is introduced. This retention of fluid is due to the antral ostium being obstructed by an enlarged middle turbinal or a deflected septum or other anatomical defect. Treatment of these cases resolves itself into restoring the patency of the ostium by rectifying the anatomical defect.

It is not uncommon to meet cases in which the operation for removal of adenoids has been performed on one or more occasions, and yet in spite of this treatment the patient still has a "wet nose." On palpating the posterior nasus one feels a soft, raised patch in the adenoid area. One is apt to jump to the conclusion that the operation has not been thoroughly done. But this conclusion may not be correct. The pad one feels may be a layer of granulation tissue kept in a septic condition by the discharge from an infected sinus. The following case illustrates this point:—

Adenoids.—A boy, aged 10½, had had "nasal catarrh" for some years, got easily tired, caught frequent colds, and sometimes lost his voice. Tonsils and adenoids efficiently removed 18 months previously; he seemed better for some months but then gradually the above-mentioned symptoms returned. Lavage of right antrum yielded a mass of muco-pus. Immediate improvement in symptoms ensued.

To ignore the possibility of a sinus infection in such a case may bring the operation for removal of adenoids into unreserved disrepute, and may also withhold urgently needed treatment for the patient. The similarity between the symptoms of sinusitis in children and those of adenoid hypertrophy was pointed out by Cleminson.[5]

Neuritis.—A married woman came to see me on Nov. 20th, 1922, with a history of "neuritis" in various parts of the body and frequent headaches. She diagnosed her own case quite correctly after reading an article in THE LANCET [4] on sinus disease, although she had no obvious signs—in fact, her anterior nares showed no sign of pus or œdema. Her transillumination was clear, and only her own persistence induced me to proceed further and wash out her antra. Her antrum proved to be full of muco-pus. The condition cleared up rapidly; and so far the patient has had no headaches and very little "neuritis."

Arthritis.—A girl, aged 17, referred to me by Dr. J. Cohen, of Aldershot, gave a history of pain in the right knee-joint of three months' standing. No evident swelling but joint grated on movement. Nasal discharge for over a year. No subjective or objective fœtor, but her mother noticed a "sickly" odour from her handkerchiefs. Nose showed no visible pus, but transillumination was dark on right, and right antrum yielded muco-pus on proof puncture. After six washings combined with injection of argyrol her antrum was free from discharge. Her knee gradually improved concurrently with the treatment of her sinus and got quite well within a month.

I do not wish to give the impression that infection of the nasal sinuses is the only septic focus in the field of observation. It is only one of many. But it is apt to be forgotten, as I think the cases I have mentioned prove. It is a very important condition and fairly common, and the only safeguard against its being overlooked is routine examination. This should be done in all cases which may possibly be due to sinus disease. This paper is a plea for routine examination of the nasal sinuses.

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Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF OTOLOGY.

THE first meeting of the section for the session was held on Nov. 3rd, under the presidency of Mr. SYDNEY SCOTT.

Changes in the Inner Ear in a Deaf Dog.

Mr. J. S. FRASER (Edinburgh) gave an interesting epidiascopic demonstration of the changes he had discovered in the inner ear of a dog which had been deaf from birth. He said they differed from those seen in dancing mice, which had also a deficient power of balancing. In the latter there were changes in the neuro-epithelium of the cochlea and the saccule. Alexander had held that an important cause of the changes in the cochlea was a deficiency in the vascular supply. Further study was required to discover the relationship of pigmentation to congenital deafness. The lesion in cases of congenital deafness was evidently in the region of the stria vascularis.

The PRESIDENT said the disease in these cases was apparently limited to the membranous labyrinth, and it was probably associated with failure of secretion of the stria vascularis. His own view had been that the stria vascularis corresponded to the analogue of the choroid plexus. He congratulated Mr. Fraser on the beauty of his slides.—Dr. ALBERT GRAY (Glasgow) said he had heard from veterinary surgeons that deafness was much more common in dogs than in horses or cats. He had made sections from the ear of a deaf albino cat, and they were very similar to those shown by Mr. Fraser now from the dog. He thought the lesion was confined to the ductus cochlearis. The organ of Corti was flattened, and the tectorial membrane was rolled over it. He referred to the greater complexity of the human auditory apparatus in comparison with that of animals, and the difficulty of applying Mendelian principles to the human subject.—Prof. F. HOBDAY, F.R.C.V.S., remarked on the frequency with which congenital deafness was met with in the bull terrier, and veterinarians deplored the fact that they were powerless to remedy it. He hoped the work would be continued, and he considered this a further illustration of the need for coöperation between the medical man and the veterinary surgeon.

Otoliths in Fishes.

Mr. G. ALLEN FROST gave an exhaustive demonstration, by means of lantern slides, on the otoliths found in a large number of varieties of fishes.

In the discussion which followed, most of the speakers expressed the view that fishes could not hear ordinary sounds, but were remarkably susceptible to slight vibratory impulses, not only communicated direct to the water, but even to the contiguous bank. The PRESIDENT thought future observations in this connexion would be directed to the functions subserved by the otoliths, especially in view of the new work done in Holland in relation to the saccule and utricle and the various tonic reflexes.

Exhibition of Cases.

Sir JAMES DUNDAS-GRANT showed a patient whose pulsating tinnitus was greatly relieved by digital compression of the vertebral arteries. He pointed out the diagnostic value of the method, for in congestive conditions—i.e., at the climacteric—the compression of these arteries checked the trouble.

Mr. ARTHUR H. CHEATLE showed a woman, aged 34, who had lupus of the lobule of the ear. There was no ulceration, and the skin was smooth. No sign of lupus or tubercle could be found elsewhere. He had removed the tumour and nodule in one piece, and sutured the skin.

Mr. T. B. LAYTON exhibited a youth, aged 19, who had suffered from meningitis, from which he recovered without the performance of trans-labyrinthine drainage. He had had severe influenza ten months ago, and for years there had been chronic ear disease, with

discharge. In hospital he was so ill that it was thought he could not survive an operation. However, diseased bone was removed over the posterior cranial fossa, and a foul sloughing dura was exposed. The wound was packed, its edges left open, and lumbar puncture was carried out. No organisms were present in the fluid after 72 hours culture.

Dr. DAN MCKENZIE showed a patient on whom the radical mastoid operation was done without grafting or meatal plastic, according to the method of Bárány—i.e., operation was performed on the bone in the usual manner, without interference with the membranous meatus. In this patient there was complete healing without contraction of the meatus.—Mr. L. COLLEDGE thought it a retrograde step to treat cases in this way, because of the liability of débris and discharge collecting behind the meatus. He quoted cases which supported his remarks.—Mr. H. TILLEY agreed with Mr. Colledge, and said the surgery of these cases must be based on the best which could be done for 95 per cent. of the cases, rather than on what might happen to 5 per cent.—Dr. P. WATSON-WILLIAMS said that sometimes by not interfering with the tympanic wall one might retain to the patient a useful degree of hearing, whereas by a more complete operation a good deal of the hearing power might be lost.

Dr. MCKENZIE also showed a patient, a woman aged 60, whose cholesteatoma with fibrous changes produced a close simulation of malignant disease. An old-standing discharge was followed by recent facial paralysis, a hard semicircular mass could be felt under the skin and extended down in front of the ear as far as the tragus. The fibrous mass contained fibromatous material and gland tissue, and examination revealed no trace of malignancy.

Dr. A. R. FRIEL showed two patients whose chronic suppurative otitis media he had successfully treated by ionisation. The first patient, 16 years of age, had had aural discharge for many years, and it had persisted in spite of the application of drops. He brought about destruction of the granulations on the posterior wall by zinc electrolysis and nitrate of silver, followed by zinc ionisation of the cavity from which pus had been aspirated. This caused the discharge to cease. He described the technique in detail. His other case gave a history of aural discharge on one side for four years. There was attico-mastoid disease with a fœtid discharge, and cholesteatoma with polypus and granulations in the tympanum. Much the same treatment was carried out as in the last case, and the ear had now been dry for several months.—Dr. WILLIAM HILL said that although at first he felt sceptical as to whether Le Duc's method was likely to benefit such cases as Dr. Friel showed, he had been agreeably surprised at the results that gentleman had secured.

Mr. H. RICHARDS showed a woman, aged 27, the subject of herpes auris on the concha and floor of external auditory meatus. She had transient otorrhœa 16 years ago. Spontaneous gradual improvement set in. He also showed a case of cerebral abscess as a sequel to an otitis media which had completely healed. The abscess (encapsuled) was found to be in the temporo-sphenoidal lobe. The recovery was uninterrupted.

LIVERPOOL MEDICAL INSTITUTION.

A MEETING was held on Oct. 25th, with Dr. J. HILL ABRAM, the President, in the chair, when Dr. JOHN HAY and Dr. H. WALLACE JONES contributed a note on

Dextrocardia.

Dr. Jones said that the term dextrocardia in its widest sense was applied to a heart beating in a more or less permanent manner in the right half of the thorax. The condition had been known from ancient times, but the modern application of X rays and electro-cardiographs had made the diagnosis one of comparative ease. He classified the varieties as follows:—Inversions: "Mirror image" of the heart. 1. Complete. 2. Incomplete—(*a*) transposition of viscera with heart in the normal position; (*b*) complete inversion of the thoracic organs, and a liver situated in the middle line; and (*c*) inversion of the heart only. Dextro-versions: Heart displaced to the right without inversion of the cavities. (*a*) Occurred during fœtal life; and (*b*) acquired since birth. He showed records of four cases—two cases of complete transposition with inversion of the main deflections in lead 1 of the electro-cardiograph and two cases of acquired dextrocardia, not due to any obvious cause, with normal electro-cardiograph records.

Dr. T. W. WADSWORTH read a note on a case of

Syringomyelia.

He said that the cord was obtained from a patient in the Walton institution, who died, aged 51, from a pontine hæmorrhage. There was an extensive gliosis of the central region of the cord extending from the upper cervical cord to the lumbar region. In the cervical and mid-dorsal regions there were large cavities near the central canal, not lined by ependyma. He had manifested symptoms of syringomyelia for over 20 years, and carried on his occupation as a labourer up to three years of the time of his death. The hands were claw-like, with many scars, due to old painless injuries and burns—some of the latter were recent; tactile sensation was almost normal, but there was loss of sensation to heat, cold, and pain, especially of the hand. There was well-marked scoliosis and spasticity of the legs; towards the end he became ataxic. No arthropathy, perforating ulcer, or nystagmus was present.

Dr. A. C. RANSOME read a paper on the treatment of

Late Neuro-syphilis and Disseminated Sclerosis.

He gave the results of his treatment of these two classes of organic nervous diseases in Manor Hill Neurological Hospital. Cases of tabes, tabo-paresis, and early G.P.I. were divided into two groups for treatment according to the condition of the cerebro-spinal fluid. Those with a high cell count, a tabo-paretic gold curve, an excess of globulin, and a positive W.R. were given intrathecal injection of re-enforced salvarsanised serum, while those with a luetic gold curve, a lower cell count, and globulin excess and positive W.R. were given neokharsivan or oxycyanide of mercury by intravenous injection. Both groups received the same after-treatment of mercury and pot. iod. by mouth. The clinical results of treatment agreed very closely with the effects on the condition of the cerebro-spinal fluid. In this the reduction of lymphocytes, of globulin, and the flattening out of the gold curve were very marked, and were accompanied by the cessation of pains and crises, by increased control of sphincters, and in some cases by ability to return to work. Slides were shown illustrating the condition of cases before treatment, after treatment, and after an interval of a year. Thirteen cases treated by intrathecal salvarsanised serum showed 8 improved, 3 no change, 1 worse, 1 transferred. Twenty-six cases treated by intravenous neokharsivan and oxycyanide of mercury showed 9 improved, 11 no change, 6 left hospital. Thus intrathecal treatment appeared to be more efficacious than intravenous, in spite of the fact that the former group were more advanced clinically and pathologically. Thirty-six cases of disseminated sclerosis were treated by intravenous injection of silver salvarsan on the assumption that the disease is caused by a specific spirochæte distinct from that causing syphilis. The results were 14 improved, 10 no change (including 5 only recently treated), 9 left hospital, 3 died of intercurrent disease. While allowing for errors of observation, possible remissions, for the concomitant effects of massage, exercises, healthy surroundings, &c., Dr. Ransome considered the result of this treatment as encouraging and worthy of further trial.

Dr. DOUGLAS BIGLAND thought that too much weight had been placed upon the colloid gold reaction, which was notoriously unreliable on occasions. This test was most useful when it agreed exactly with the other spinal fluid reactions. Good results might be obtained from intrathecal therapy, but he had obtained just as good effects

with drugs administered by the intravenous and oral route. He considered that when two methods of treatment give approximately equal results, the simpler, the less expensive, the less painful, and the more generally applicable one should be used in preference to the one not having these advantages. The effects of mercury, especially when administered by inunction, were little short of marvellous in certain forms of neuro-syphilis.

Dr. BAKER YOUNG stated that the advocates of intrathecal therapy claimed that advanced cases of neuro-syphilis could be benefited, and in some cases be enabled to return to work; in others the improvement would allow them to resume home life. Cases in which a paretic curve with the gold sol is persistent in spite of treatment were invariably fatal and particularly prone to suicide. Intrathecal therapy was indicated in early cases which showed an abnormal fluid. J. A. Fordyce had stated that at least 25 per cent. showed changes even after intensive treatment intravenously. If these cases were then treated intrathecally the fluid became normal, and the natural inference was that a potential tabetic or paretic finale had been avoided. Dr. Young congratulated Dr. Ransome on the excellent results of his cases.

ROYAL MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

A MEETING was held on Oct. 19th, Dr. A. MAITLAND RAMSAY, the President, being in the chair.

Discussion on Pathology, Symptomatology, and Treatment of Disseminated Sclerosis.

Dr. DOUGLAS ADAMS, in an opening paper, briefly reviewed the literature of disseminated sclerosis, and referred more particularly to recent results obtained in an investigation which is being carried out in the pathological department of the University and Western Infirmary of Glasgow in collaboration with Drs. E. M. Dunlop, J. W. S. Blacklock, and J. A. A. W. McCluskie. In a considerable number of cases paralysis had been transmitted to rabbits by the injection of blood or spinal fluid from patients suffering from the disease, and had been passed from rabbit to rabbit both by direct inoculation and by passage through culture. Spirochætes were found in the organs of seven of the inoculated animals both by dark ground examination and by staining, though examination of the cultures employed yielded negative results. These results were regarded as confirming the view that the disease is infective in origin. Emphasis was laid on the necessity for early diagnosis, and in this connexion the value of the colloidal gold reaction was urged. The results of intensive anti-specific treatment of 50 cases were referred to. In many cases considerable clinical improvement had been noted, and this had coincided with a modification of the colloidal gold curve in a direction towards negative. In the majority of cases the subsequent absolute or relative freedom from relapses during a period of three years was striking. The investigation was being continued under a grant from the Medical Research Council.

Dr. BLACKLOCK described in more detail the various experiments performed, and said that when blood or spinal fluid from cases of disseminated sclerosis had been inoculated directly into rabbits, about one-third of the animals developed nervous symptoms. An emulsion of the central nervous system of these paralysed animals produced nervous symptoms in a proportion of cases on inoculation into other animals either directly or after passage through Noguchi's medium. No nervous symptoms had been noted in over 200 normal control animals kept under observation for periods varying from four months to over a year, nor had paralyses developed in animals inoculated with various protein substances. He considered it probable that a virus was present in the blood and cerebro-spinal fluid of these patients which was capable of existing in the central nervous system and of producing paralysis in a proportion of the animals inoculated. The pathological lesions that had been noted in the central nervous system of the inoculated animals were: (1) Cellular infiltration, chiefly under the ependyma of the ventricles. (2) Degeneration of nerve tracts—this latter had been observed only in one animal that had lived for over a year after the onset of paralysis. The other animals that had shown nervous symptoms had lived for too short a time after the onset of such symptoms to allow definite pathological changes to occur. (3) Petechial hæmorrhages. (4) Multiple lesions of the nature of softening.

Dr. BROWNLOW RIDDELL referred to the frequent occurrence of slight and transient eye symptoms in the early stages of the disease, and urged the importance of a critical interpretation of such symptoms in a case presenting no other apparent clinical feature. The surprisingly slight attention paid by the average patient to transient eye symptoms, with the speedy recovery therefrom, and the absence of any other sign or symptom, combined to present a clinical picture often under-estimated or attributed to a functional, hysterical, or digestive origin. Dr. Riddell then considered in detail various symptoms, including diplopia, acute retro-bulbar neuritis, nystagmus, and optic atrophy, and described a number of illustrative cases.

Prof. C. H. BROWNING, in commenting on the results of the experimental work, said that the small proportion of successful transmissions was not surprising in view of the insusceptibility of both man and animals to the disease. He emphasised the fact that the virus persisted in the culture media which had been inoculated with blood from cases and kept over long periods in the incubator, and was inclined to the opinion that the pathogenic agent was a living organism or the product thereof. He then referred to the value of the colloidal gold reaction as a means of early diagnosis and of controlling the results of treatment.

Prof. ROBERT MUIR, in referring to the pathological and histological changes in the disease, said that, while very definite, they yet presented certain peculiar characteristics. The essential features at an early stage were (*a*) a disappearance of the myelin sheaths, (*b*) a persistence of the axis cylinders, and (*c*) an absence of Wallerian degeneration. These changes occurred in patches which were often sharply cut off, as though by a knife, from the surrounding healthy tissues. The process was peculiar and quite unlike a true sclerosis. The colloidal gold reaction in the cerebro-spinal fluid he considered would mark a real advance if completely established, and would prove of great assistance in controlling treatment. Referring to the ætiology he was of the opinion that, while a great many facts supported the infective theory, the state of the experimental work was as yet too uncertain for complete proof—while hopeful, it was not conclusive.

BATH CLINICAL SOCIETY.

A MEETING was held recently with Dr. W. P. KENNEDY, the President, in the chair.

Dr. R. G. GORDON read a paper on the Difficult Child. He dealt with the types of difficult behaviour in children both in infancy and in later life. The importance of the attitude of the parent was emphasised. The causes of failure of integration of the personality leading to difficulty in adaptation to life were classified under three headings in relation to the proper functioning of the cortex: (1) Failure of development—mental deficiency; (2) disease of the cortex, specially congenital syphilis and epidemic encephalitis; (3) inherent lack of proportion in dispositions leading to psychological maladaptations. Illustrative cases were quoted.

Dr. R. WATERHOUSE, Mr. A. L. FULLER, and Mr. J. S. LEVIS showed specimens.

Rebiews and Notices of Books.

THE MECHANISM AND PHYSIOLOGY OF SEX DETERMINATION.

By DR. RICHARD GOLDSCHMIDT. Translated by Prof. W. J. DAKIN. London: Methuen and Co. 1923. With 113 figures. Pp. 259. 21*s*.

SEX is an accident, the result of the immutable laws of chance. To the world at large it does not matter at all which individuals are male and which are female, so long as there are approximately the same number—or an equivalent functional number—of each. But it matters so much to the individual, or so he or she thinks, that the problem of sex determination has always been one of absorbing interest. This massive and scholarly book discusses the whole question on the basis of sex as a Mendelian character, and in it the author weaves together a fascinating account of cytology combined with experiment, pointing out very clearly how the two lines of research have dovetailed into one another. After an account of the normal behaviour of the sex-chromosomes, and a discussion of the intersexes in moths which he has himself studied to such good purpose, the author gives a clear summary of the main position.

Every developing individual of a bisexual organism contains the substances whose action can call forth the one or the other sex. A particular mechanism, disclosed by Mendelian experiment and visible in the sex chromosomes, distributes these substances to the offspring in such a manner that half the offspring receive the substances in one proportion whilst the rest receive them in another, and so that either the male or the female substances are present in excess quantity. These substances act like enzymes—proportionally to their concentration. The quantitative difference of the substances in the two groups of individuals is automatically responsible for either the male or female enzyme completing the determining reaction first. This reaction is the production of specific hormones of sexual differentiation.

There is one pathological relation in which the author's conception that each factor is a dose which may diminish or be exhausted in the course of the individual's life is specially suggestive. A hen is female because its femaleness predominates, not because it has no maleness, and its femaleness may, as it were, wear out. It may then become an anatomical, and even a functional, cock. The magnificent studies of Miss Stye on the inheritance of cancer in mice (summarised in a convenient form by Prof. H. G. Wells in the *Journal of the American Medical Association*, vol. lxxxi. (1923), pp. 1017, 1103) show that the tendency to develop cancer behaves as a Mendelian recessive character. And the age-incidence of the disease suggests that we may here have another example of the quantitative efficacy in time of a heritable quality such as explains the changes of sex in fowls and moths.

The later chapters deal with various special problems—the inheritance of secondary characters, hermaphroditism, parthenogenesis, numerical sex ratios and sex determination in man. There is no recipe for getting a boy, and those who have no particular knowledge of the modern development of the subject will not find the book very easy reading. But it is worth some pretty stiff study.

PSYCHOLOGY.

The Psychology of Reasoning. By EUGENIO RIGNANO, Professor of Philosophy in the University of Pavia. Authorised translation by WINIFRED A. HOLL. London: Kegan Paul. 1923. Pp. 395. 14*s*.

Prof. Rignano's aim is to show that reasoning depends upon two primordial activities, the intellectual and the affective. The first consists in mnemonic evocations of perceptions and images of the past; the second appears as aspirations towards a certain end, whither the reasoning is directed. Retention and recall of memories are easily explained thus: "The simple conception of specific mnemonic accumulation, that is to say, of specific nervous energy which passes alternately from the actual to the potential state and vice versa, is sufficient to account completely for the phenomena of evocation" (p. 374). But why formulate this conception, which is simple only through the impossibility of examining the supposed physical mechanism? The satisfaction derived from its contemplation is an unhealthy substitute for a confession of ignorance. It is really offered as an alternative to the theory of the unconscious, but is lacking in the pragmatic justification which the latter possesses. The author criticises this theory on a priori grounds; he has plainly not attempted to employ those practical methods, unknown to the older academic psychology, which necessitate the theory of the unconscious as a convenient means of summing up the results obtained.

The author shows a thorough grasp of the views enunciated by recognised authorities, and brings his own ideas into relation with general theory. But the book reminds us that psychology was till recently little more than philosophical speculation, and it is disappointing to the reader who seeks the possibility of applying psychology to the actualities of life.

The Unconscious Mind. By S. HERBERT, M.D., M.R.C.S., L.R.C.P. London: A. and C. Black. 1923. Pp. 230. 6*s*.

THIS book covers within a small space the greater part of psycho-analytical theory. Except for some illustrations from the author's own experience it is a compilation from well-known sources, with occasional criticism. It will prove useful to anyone who wishes to obtain a general idea of the ramifications of Freud's theories and is willing to believe them; but it will carry little conviction to those for whom belief is difficult.

THE PRACTICAL MEDICINE SERIES.

Vol. I. *General Medicine.* Edited by GEORGE H. WEAVER, M.D., LAWRENCE BROWN, M.D., ROBERT B. PREBLE, A.M., M.D., BERTRAM W. SIPPY, M.D., and RALPH C. BROWN, B.S., M.D. Series 1923. Chicago: The Year Book Publishers. Pp. 678.

THE multiplicity of medical literature at the present day makes it impossible even for the research worker to keep abreast of the advances of medical knowledge except in a very narrow field. Epitomes of advances must accordingly be of ever-increasing value to all members of the profession. The present volume deserves a wide circulation; its contents are largely derived from American sources, and if this deprives it of completeness it is at the same time a further tribute to the excellence and magnitude of the clinical and laboratory research which is in progress in the United States. Full references are given. No medical man who reads this book can fail to secure from it both interest and instruction. The volume is compact, and is enriched by numerous illustrations reproduced from the original articles quoted.

A PRÉCIS OF PATHOLOGICAL MEDICINE.

Maladies de l'appareil respiratoire. By FERNAND BEZANÇON and S. I. DE JONG. Paris: Masson et Cie. 1923. Pp. 566. Fr.20.

TEXT-BOOKS seem to be getting smaller as knowledge increases, an observation which suggests that the concentration of knowledge in the older text-books was not very high. The present volume is characteristic of the modern tendency. There are, indeed, as many as 566 pages, but the print being large and the pages small, the words are comparatively few. Thanks to an elaborate table of contents and numerous subheadings in each chapter, the reader can speedily find any subject he is particularly interested in. The work is a study of the respiratory structures from the nose and larynx to the diaphragm. Under each heading, such as pleurisy, there are sub-headings dealing with physical signs, diagnosis, and treatment, all being arranged in a logical sequence. Scattered

throughout the book are innumerable hints and "tips," such as the experienced clinician, rather than the physician who spends most of his time in writing and teaching, is in a position to give. For example, we are told that the pleural effusion due to disease of the heart and kidneys is nearly always on the right side, and that the interlobar effusion is generally due to the pneumococcus. Some parts of this book are much better than others. The short section dealing with tuberculin treatment, for example, is unsatisfactory. The authors would, no doubt, be the first to admit this, and they could well justify themselves by the defence that the position of tuberculin treatment is itself unsatisfactory at present, and that the author who discussed it in a clear-cut, dogmatic fashion would be lacking in truthfulness. There are numerous illustrations, of which the line-drawings are undoubtedly the best. The reproductions of certain skiagrams are poor; they may possibly be of interest to radiologists, but they are not easily interpreted by the student or general practitioner.

On the whole this work fulfils its aim—that of being a handy vade-mecum.

JOURNALS.

QUARTERLY JOURNAL OF MEDICINE.—The October number contains the following articles: Paraplegia and Cauda Equina Symptoms in Lymphogranulomatosis Maligna (Hodgkin's Disease), by F. Parkes Weber. A case of Hodgkin's disease is described which came under the author's care. Ten months before death lumbar pain was noticed, which was later followed by pain in the right thigh and paraplegia. Post-mortem examination showed that these nervous symptoms were due to a lymphogranulomatous mass inside the vertebral canal, attached to the outside of the dura mater over the end of the spinal cord and the cauda equina. A periosteal growth of a similar nature was present on both outer sides of the vertebral centra near the diaphragm. A description is also given of certain other cases from the literature dealing with cord pressure symptoms in Hodgkin's disease.—Erythrœdema Polyneuritis (the so-called "Pink Disease"), by Donald Paterson and J. Godwin Greenfield. Swift, in 1914, first gave the name erythrœdema to this disease of children, many cases of which have subsequently been recorded in Australia and America. The authors, who have observed five cases, give here a clinical account of the disease and produce fresh evidence as to its essential nature, based on the post-mortem examination of the nervous system. A coloured plate shows the characteristic appearance of one of the patients, whose hands, feet, cheeks, and nose are red and swollen, but do not pit on pressure. There are muscular hypotonia and loss of deep reflexes but no pyrexia. The ætiology is unknown, but it does not appear to be a food-deficiency disease, and is probably due to infection. Peripheral neuritis and chronic inflammatory changes in the spinal cord and nerve roots are found after death. On the whole, the prognosis is good and the tendency is towards a complete recovery.—The Reaction to Adrenalin in Man, by D. Murray Lyon. Certain reactions produced by the subcutaneous injection of 0·5–1 c.cm. adrenalin chloride were studied in 35 subjects. Attention was directed to the results following the administration of the drug as judged by local and general reactions, and alterations in the blood pressure, pulse-rate, basal metabolism, respiratory quotient, respiratory rate and depth, and blood- and urine-sugar content. The subjects of the investigation included normal individuals, and sufferers from diabetes mellitus, hyperthyroidism, hypothyroidism, and asthma. Whereas in every case the systolic blood pressure showed some rise, the diastolic reading was usually lowered. The metabolic rate was invariably increased, on the average by 20 to 40 per cent. The blood-sugar was increased, but this rise occurs more slowly than is the case with the other reactions, and takes longer to pass away. A considerable proportion of the patients showed a transitory glycosuria. No changes characteristic of the diseases investigated were discovered.—The Lævulose Test for Liver Efficiency and an Investigation of the Hepatic Condition in Pregnancy, by Kenneth H. Tallerman. The author regards the lævulose test for liver efficiency as a most useful one. Observations were made upon a series of adult males who showed no signs of hepatic disease, and their blood-sugar curves were determined after administering 30 to 50 g. of lævulose by the mouth, according to the weight of the subject. The normal renal threshold for lævulose was found to be lower than for glucose. Women in the seventh month of pregnancy were also investigated. They were selected as normal cases, showing no albuminuria and no toxic symptoms. The lævulose test did not point to any impairment of liver function, but the renal threshold for lævulose in pregnancy was found to be practically non-existent.—Visceral Pain in the Upper Alimentary Tract, by W. W. Payne and E. P. Poulton. An ingenious apparatus was used to register changes in pressure in the œsophagus, stomach, duodenum, and jejunum. It consists of a small rubber bag containing water which the patient swallows and which is connected with a water manometer. With the bag in the œsophagus a wave of contraction followed by a wave of relaxation was observed on swallowing, the rate of their progress being about one inch a second. Peristaltic movement of the œsophagus is also associated with the sensation of "heartburn" felt beneath the sternum. Confirmatory evidence of Verdon's view that angina pectoris is caused by distension of the stomach was not obtained, and in one case the pain was abolished by sucking air into the stomach. In another instance angina was not associated with œsophageal movements. In gastroptosis the pressure in the stomach was found to be higher in its upper than in its lower part, and this difference may be abolished by wearing a belt. Pain in the upper abdominal region may be associated with movements of the pylorus, duodenum, or jejunum, but the exact relation of the pain to these movements was not fully determined.—Liver Atrophy, by James Miller and Andrew Rutherford. This article opens with a historical account of the views held as to the varieties of liver atrophy, and this is followed by a description of 16 cases, of which clinical and pathological notes are given. These fall into three groups: (1) Acute, corresponding with the old "acute yellow atrophy"; (2) subacute, in which, in addition to destruction of liver parenchyma, there is vascular and inflammatory cell reaction and early fibrosis; and (3) "Multiple nodular hyperplasia": here adenomatous nodules of new liver tissue are found. Five plates are included illustrating the macroscopical and microscopical appearances of the liver in various cases.—Generalised Myositis Fibrosa, with the Report of a Case, by J. A. G. Burton, John Cowan, and Hugh Miller. This is a rare disease, of which only five cases have been previously recorded. The example here described was a woman of 25, who gradually suffered from stiffness in the arms and legs, which increased to such a degree as to render her completely helpless. The muscles had the characteristic firm feeling, suggesting a sandbag or piece of wood. The electrical reactions showed no R.D., but the deep reflexes were absent. A small piece of muscle was excised, and on microscopical examination degeneration of the muscle elements was seen. The patient, despite relapses, improved very considerably with massage and electrical treatment. The appearances of the muscle are well shown in the accompanying plate.

THE TROPICAL DISEASES BULLETIN for October contains a review of recent studies on malaria by Clayton Lane.—A large section on medical zoology is reviewed by A. Alcock.—Undulant fever, dengue, pappataci, unknown fevers, Rocky Mountain spotted fevers, Japanese river fever, Oroya fever, and Verruga peruviana are summarised by P. W. Bassett-Smith. Beri-beri and scurvy are also dealt with by the same author.—Leprosy is reviewed by Leonard Rogers; yaws and a number of miscellaneous subjects by A. G. Bagshawe.

Reports and Analytical Records.

NEW ZEALAND IMPERIAL BEE HONEY.

(MARKETED BY THE NEW ZEALAND HONEY PRODUCERS ASSOCIATION, LTD., AUCKLAND. IMPORTED BY MESSRS. A. T. MILLS & CO., LTD., TOOLEY-STREET, LONDON, S.E. 1.)

When analysed this honey was found to have the composition :—

Dextrose	39·4 per cent.
Lævulose	35·8 ,, ,,
Water	16·5 ,, ,,
Cane sugar	1·6 ,, ,,
Ash	0·16 ,, ,,
Acidity (formic acid)	0·01 ,, ,,
Wax, protein, and undetermined matter	6·53 ,, ,,

Microscopical examination showed the presence of clover and heather pollen grains.

This honey is of a mild and pleasant flavour, which cannot be said of all Australasian honeys. It is a pure honey containing no admixture of invert sugar or dextrin-glucose and no preservatives. The makers state that at no time during extraction or packing is it touched by hand. It should prove a useful addition to the limited supply of home-produced honey.

MOUNTAIN DEW SCOTCH WHISKY.

(EDWIN YOUNG & CO., GLASGOW, LONDON, AND LIVERPOOL.)

This well-known brand of whisky, which claims to be "the real original as sold prior to 1834," when analysed gave the following results :—

Proof spirit	70·15 per cent.
Equivalent to	29·85 U.P.
Absolute alcohol by volume	40·1 per cent.
Total extractives	0·15 ,, ,,
Ash (mineral matter)	0·01 ,, ,,
Secondary constituents expressed as parts per 100,000 of absolute alcohol—	
Volatile acidity (as acetic)	19·4
Fixed acidity	Nil.
Furfural	0·6
Esters (as ethyl acetate)	44
Aldehydes	22·5

Considerations based on these analytical figures point to this whisky being a thoroughly well matured and carefully made spirit. The flavour and aroma are agreeable and characteristic of a high-grade Scotch whisky.

SOFTENING OF HARD WATER.

A sample of water received on Oct. 25th from a physician at Scarborough, when analysed was found to contain :—

Total solids	26 parts per 100,000
Total hardness (soap test)	20 ,, ,, ,,
Permanent hardness	9 ,, ,, ,,
Temporary ,,	11 ,, ,, ,,

To soften every 100 gallons of this water 2 oz. of a mixture consisting of 4 lb. freshly slaked and powdered pure lime and 3 lb. of anhydrous sodium carbonate should be added. The 2 oz. should be stirred up with about a quart of the water and the resulting cream thoroughly stirred into the 100 gallons. The whole should be allowed to stand until clear (not less than 12 hours) when the upper portion may be drawn off for use.

LLATAI FINE TOILET SOAP.

(LLATAI TOILET CO., 122, QUEEN-STREET, CARDIFF.)

This soap, which is made up into heart-shaped tablets, is stated by the manufacturers to be prepared from tallow and American resin. When analysed it was found to have the composition :—

Water	12 per cent.
Fatty and resin acids	76·5 ,, ,,
Total ash	17·65 ,, ,,
Free caustic alkali	nil
Alkali (Na_2O) combined as sodium carbonate	0·1 ,, ,,
Alkali (Na_2O) combined as soap	9·44 ,, ,,
Resin acids	Present

The moisture in this soap is very low, which makes it unusually economical to use. Another point in its favour is the absence of free alkali. It is pleasantly, but not excessively, scented with woodruff, and lathers well.

New Inventions.

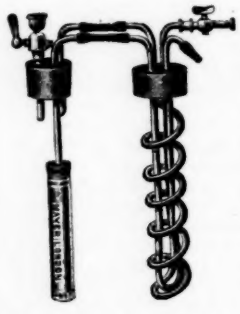
APPARATUS FOR THE ADMINISTRATION OF WARMED ETHER VAPOURS.

IN this apparatus the air from the bellows, instead of passing direct through the ether, is first heated by being passed through a loop of copper tubing, which is placed within the spiral coil immersed in hot water and contained in the large thermos flask. This increases the evaporation of the ether, thereby producing a high percentage of ether vapour, and a steady and uniform strength. The heated air passes by a small tube into the ether bottle and into a large metal cylinder, so that the cylinder which goes to the bottom of the ether bottle can slide up and down over the small tube, and this can be made adaptable, if necessary, to a varying size of bottle. The cylinder, which is closed at the lower end, has a number of small holes through which the air passes into the ether. This results in the air-bubbles, instead of being large, as produced by a single tube, being broken up into a number of smaller ones. Thus the air becomes more thoroughly saturated with ether. The apparatus has the following advantages: 1. A very strong ether vapour can be produced, resulting in a deep anæsthesia, so that very little chloroform need be used, often none at all. 2. The thermos flask being a large one, it is only necessary to change the water in exceptionally long operations. 3. No freezing takes place in any part of the apparatus. 4. By sliding up the cylinder, a weak ether vapour can be procured and a mixture of chloroform can be employed. 5. By removing the cylinder, hot air passes over the ether, so that with the addition of a manometer it can be used as a simple form of apparatus for intra-tracheal use. 6. The anæsthetic vapour or vapours and air are thoroughly heated. 7. The spiral tube in thermos flask is an excellent device for heating nitrous oxide, oxygen, and so forth. 8. The apparatus can be used for warmed oxygen and alcohol inhalations. I have had the apparatus in use for some years in South Africa and found it of great value.

FIG. 1.

Apparatus for the administration of warmed ether vapours.

FIG. 2.



Shows the metal cylinder and the copper tubing and spiral coil.

Messrs. Mayer and Meltzer of Cape Town, and Messrs. Mayer and Phelps, New Cavendish-street, London, are the makers.

Cape Town. G. W. BAMPFYLDE DANIELL, M.R.C.S.

Public Health Services.

MINISTRY OF HEALTH: THE GENERAL PRACTITIONER SERVICE.

THE section of the annual report [1] of the Chief Medical Officer of the Ministry of Health for 1922 dealing with service under the Insurance Act shows how the work of the men in general practice is recognised now as part of the Ministry's activities. Those who undertake insurance work form a definite part of the "great national organisation for the control of disease and the prevention of premature death," to quote Sir George Newman's words. It is well that this should be recognised both by the public and the medical profession.

Both the value and the potentiality of the service is shown by the figures quoted in the report. There are approximately 12½ million insured persons on the practitioners' lists, and rather more than 12,500 practitioners under contract to give the necessary treatment in the form of medical benefit, the average number for which each practitioner is responsible being therefore about 1000. As an indication of the amount of work involved in the year under review it is estimated that 6 million persons received treatment and about 44 million attendances were made. The small number of cases dealt with by the disciplinary committees and tribunals affords some index of the standard of efficiency and conscientiousness which has been reached, and the general satisfaction given; with such evidence, positive and negative, to rely upon the assertions that the medical benefit clauses have wholly failed in their promise and objects need not too much depress us. Lapses, however, do not go unnoticed; 520 reports of investigations into complaints were received in 1922, and in 84 cases, the complaints being substantiated, fines were inflicted. Seven representations were made to the Minister that the practitioner should be removed from the panel. Of these cases, five were investigated by inquiry committees and two of the practitioners were removed from the list. The three remaining practitioners were not removed, but in one case a sum of £100 was withheld from the practitioner's remuneration. In two cases an inquiry was not held, one practitioner's name having been removed from the Medical Register, and the other having given satisfactory assurances for the future ordering of his practice.

The work of the Regional Medical Staff is reported upon in favourable terms. The services of the regional officers have been sought in a greater number of cases. The references of cases of doubtful incapacity for work amounted to 113,685 in 1922 as compared with 69,543 references in 1921. In addition, 1253 consultation cases were referred, and of these 802 were examined. The staff also examined 382 persons claiming old age pensions under the Blind Persons Act of 1920. It may be remembered that it is also incumbent on the regional staff to inspect the medical records and the register of dangerous drugs required to be kept by all dispensing doctors under the Home Office Regulations of 1920. The work of the staff and the practitioners will be more effective when the additional facilities for diagnosis are in operation next year, and the help which the regional medical officers could give to insurance practitioners would be considerably greater if the provision of hospital beds were materially increased.

The attention of general practitioners may be specially called to the concluding observations of Sir George Newman in which he emphasises the importance of early diagnosis. "We are liable to forget that the largest burden of our invalidity, and the chief contribution to premature mortality, are due to the neglect of the comparatively minor or incipient forms of sickness and ill-health. . . . They lay the foundations of the major diseases. . . . This is one of the great spheres where the medical practitioner coöperates with the Public Health Service."

[1] On the State of Public Health. Annual Report of the Chief Medical Officer of the Ministry of Health, 1922.

MENTAL HOSPITALS SERVICE.

THE recently published reports of three mental hospitals [2] in England, Northern Ireland, and India respectively present several features of interest. Each report is something more than a formal record of the year's activities, and a quantity of information is given which enables the reader to appraise the work of the institutions and the difficulties which have been encountered.

At Hellingly a visiting dentist and surgeon have been appointed, and during the present year it is hoped to add an ophthalmic surgeon to the consulting staff and an operating theatre to the equipment of the hospital. A long list of operations performed during the year under review indicates the future value of this improvement. An out-patient department under the direction of the medical superintendent has been opened in Eastbourne, and the number of patients attending it has steadily increased. Dysentery has unfortunately been more or less endemic in the hospital throughout the year, and 14 deaths occurred from this disease. It is interesting to note that treatment with a stock vaccine (Shiga and Flexner), as recommended by the Board of Control, produced no appreciable effect, but the results of treatment with an antidysenteric serum were "most satisfactory, patients reacting immediately." Good results were also obtained with luminal in epileptic cases, the number of fits being greatly reduced, but no improvement in the mental condition occurred, and withdrawal of the drug was apt to be followed by status epilepticus.

The Belfast District Asylum, which is constructed on the "Villa Colony" system, has undertaken the erection of further new buildings, including "reception villas" for new cases. It has now been decided to combine these in a single building for the treatment of recent cases, male and female, so situated that all contact with the chronic insane will be avoided. The diet of the patients has been amplified, chiefly by the addition of fresh garden produce in the form of salads. No less than 81 per cent. of the patients are usefully employed. A "tuck-shop" has been installed in the grounds, where patients and their friends may buy confectionery, fruit, and tobacco. Parole has been granted to a large number of patients. On the recent retirement of the matron and the head attendant these positions were combined as a single office, and the newly appointed matron has control of both female and male nursing staff. This report, as usual, is attractively illustrated with photographs of the estate and of the wards.

The European Mental Hospital at Ranchi, which accommodates about 150 patients, has recently been transferred by the Indian Government to the control of a Board of Trustees. It has also been "affiliated to the University of London in connexion with the examination for the Diploma in Psychological Medicine." Its name has been changed from "Asylum" to "Mental Hospital" under the provisions of the Indian Lunacy (Amendment) Act, 1922, and this change is regarded as signalising the first step towards the hospitalisation of the Indian asylums. The medical superintendent, in a long report of great interest, alludes to some of the difficulties which attend the treatment of the insane in India. Of these the nursing problem appears the greatest. No mental nurses in India hold qualifications, for there are none to be obtained in that country; their training is often inadequate, and "in existing circumstances—i.e., of inadequate remuneration and work under very trying conditions—persons who are willing to engage in the care of the insane do not possess, as a rule, the education that is otherwise desirable."

[2] Annual Report of the East Sussex County Mental Hospital, Hellingly. Annual Report of the Belfast District Asylum. Report of the European Mental Hospital at Ranchi (India).

There is also a lack of any organisation in the country to deal with mental prophylaxis and the after-care of discharged patients. Among the minor difficulties and abuses may be noted the confinement of civil patients in jail for purposes of observation, and the conveying of female patients to the hospital by male police officers. Certification papers are often faulty, and the medical superintendent has suggested an amendment to the existing law to provide for the detention of improperly certified patients pending further steps, but this proposal has not been adopted. The War Office has recently arranged for the free conveyance of mentally afflicted members of families of Government officers to the United Kingdom. Accommodation has been set aside for this purpose in all transports. Difficulties, however, have arisen; "great difficulties are placed in the way of even quite quiet mental cases taking air and exercise on deck" and "in the case of male patients the absurd prohibition to shave or be shaved appears still in force." Finally, under the existing English law, such patients have to be re-certified in the United Kingdom. As regards the work of the hospital, stress is laid on hydrotherapy, which is conducted in the patient's own room in order to eliminate disturbance and enhance the sedative effect, and on occupation therapy, for which a work master and mistress are badly needed. Organotherapy (with extracts of ovary, thyroid, and pituitary) has yielded "most discouraging results." Parole is granted to a large number of cases with no untoward results hitherto. Various changes are contemplated, including the abolition of male attendants and their replacement by female nurses. There is altogether much evidence that lunacy administration is undergoing changes more numerous and rapid in India than in England.

SCHOOL MEDICAL SERVICE.

Liverpool.

THE coöperation between the School Medical Service and the University in Liverpool has resulted in an important extension of facilities for dental training. Fourth and fifth year students are allowed a regular attendance at the school clinic for a period of one or two months at a time, during which they are under the personal supervision of the school dentists, and have excellent opportunity for increasing their experience of dental work amongst school-children. At present, owing to the cost of equipment, only four or five students attend simultaneously, but it is hoped shortly to accommodate at least 12 students at a time. The advantages gained by the university and the education committee are mutual and well balanced, as the amount of work undertaken in 1922 shows a considerable increase over that of the previous year—6828 against 5859 cases—although the arrangements had only been in operation for about three months. The increase in the amount of dental work undertaken in Liverpool is enormous. The figures have risen steadily from 13,481 in 1919 to 29,772 in 1922. "The presence of active dental caries was noted in about 78 per cent. of the children of clinic age examined, this being the most prevalent defect amongst school-children for which the committee are required to make provision. As years go on and treatment is carried out over a wider area, the proportion will no doubt considerably diminish, but the problem will always be an expensive one to cope with."

Dr. E. W. Hope, the medical officer, reports that for years past in Liverpool sporadic cases of what was considered to be trachoma, a contagious inflammation of the lining membrane of the eyelids and front of the eye, have been discovered chiefly in the Kirkdale district, but not in sufficient numbers to require special action to be taken. During 1922, however, a number of suspicious cases were reported from schools in different centres of the city, and on these being sent to the committee's oculist for examination and report, it was found that 28 out of 32 were definite cases of trachoma, the remaining four being cases of follicular conjunctivitis. Only two girls were affected, and the majority of the children were between 12 and 13 years of age. At the end of four months only four were cured. During the year 115,835 children were examined, 73,484 of these being elementary school-children, and only 306 cases of malnutrition were found. This is equal to 0·87 per cent. and compares with 1·3 per cent. in 1921 and 1920. In 1913, the year before the war, this figure stood at over 7 per cent., and in 1914 was 5 per cent., so that the recent figures may be considered small by comparison.

The report of the inspector of physical training makes interesting reading, and it is good to know that the scheme of organising games for boys and girls in the parks during the summer holidays is being continued. The parks are provided with paid "play leaders," and games apparatus consisting of cricket bats, balls of various kinds, skipping ropes, net-ball outfits, rounder bats and balls, in addition to numerous other necessary appliances are provided by the committee. This apparatus is stored in lock-up huts which were erected in the parks in 1920. The scheme is one which should be copied far and wide.

Manchester.

In Manchester the staff has been reduced by two nurses and three clerks, and Dr. Brown Ritchie considers the staffing in all departments below the amount necessary for satisfactory work. He draws the committee's attention to the fact that a considerable amount of clerical work, which is bound to increase, is involved in work not strictly medical, such as the work connected with school attendance. Such work as this cannot be delayed or set aside as promptness of action is an absolute necessity here. He deplores also the increase in the number of cases seen by the doctor, from eight to ten per hour. The Shakespeare-street School for Stammerers dealt with 57 cases in six courses—48 boys and 9 girls. Analysing 100 children chosen haphazard out of those already treated at this centre, 78 per cent. might be regarded for practical purposes as normal speakers, 45 of these had perfect speech, the remaining 33 speaking perfectly normally to the ordinary listener, but stating that under stress of excitement or if in a state of poor health there is an occasional hesitation of varying degree—this, they say, they are able to control so that the interruption is scarcely perceptible to the listener; 17 stammered at intervals but not to such a degree as to unduly interfere with their occupation; five stammered in a pronounced fashion. The number of cases of scabies has decreased by 236—almost one-third of the decrease being attributed to the Norwegian treatment by Marcussen's ointment [a] which has been used at the special skin clinic here for two years. The treatment is now given in a special department of one of the clinics, and one nurse, one bath attendant, and one bath are now made use of instead of the two nurses, three bath attendants, and three baths of the previous year. The number of children examined was 35,574 in the routine group, 27,729 "specials," and 24,415 "re-examinations." The number of inspections made by nurses for uncleanliness was 235,359. Dr. Brown Ritchie urges the necessity for day open-air schools for the 2000 cases found specially suitable during the past year, and the insufficiency of accommodation for mentally defective children is also brought to the committee's notice; the accumulation of cases now waiting to be dealt with amounts to 900. In the medical officer's opinion, with such an accumulation and in the absence of provision for special training of children over 14 years of age, it is inexpedient to retain all cases until they have reached the age of 16. This is a point which decidedly requires consideration by the majority of education authorities at an early date. The coloured chart at the end showing the growth of medical inspection and treatment since 1915 is very striking and speaks for itself.

[a] See THE LANCET, Modern Technique in Treatment Series, No. V., The Treatment of Scabies and Pediculosis, 1923, i., 247.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 10, 1923.

EDUCATION IN OTO-LARYNGOLOGY.

THE Semon lecturer acted wisely in choosing as his subject a plea for adequate training of the student and graduate in laryngology and otology, and for closer coöperation in the conduct of clinics and in collective investigations in these subjects; and we believe that Dr. LOGAN TURNER'S address, delivered at the Royal Society of Medicine on Nov. 1st, will do much to further the cause which he has at heart, the advancement of oto-laryngology in this country. Two recent educational alterations have considerably affected the relations of the student to these subjects. In the first place, the new regulations of the General Medical Council have now made instruction in laryngology and otology compulsory for every candidate seeking a degree in medicine and surgery, and, secondly, the Conjoint Board have decided to grant, after examination, a special diploma in oto-laryngology, the object of which is, more particularly, to provide what may be called a hall-mark for medical officers working under the Ministry of Health and the educational authority, whose duties are largely concerned with disease of the throat and ear. Dr. TURNER points with satisfaction to these two signs of progress and believes, we think rightly, that the public will benefit from the improved training which the medical officers will receive, and that the specialty will gain prestige through the better conduct of the work performed. He advises all who are interested in the welfare of these branches of medicine and surgery to consider carefully the best means to provide both the student and the budding specialist with adequate training, and, beside these two points, he considers that a third and most important matter is to afford improved opportunities for education to the teacher himself.

For the education of the student Dr. TURNER suggests a ten weeks' course of mixed didactic and clinical instruction, consisting of three meetings per week for each student—that is, 20 hours devoted to clinical work and ten to lectures—and he gives his opinion that a considerable amount of useful knowledge can thus be imparted. As he says, it is all that can reasonably be granted to one of the subsidiary subjects; it is certainly an increasingly difficult problem for the student to find time to acquire even a minimum adequate knowledge of the continually expanding number of subjects which he has to learn. Some knowledge of diseases of the throat, nose, and ear is very necessary to the general practitioner, who finds that these diseases play a far larger part in his work than he had any idea of when he was a student. There is no doubt that a more intimate knowledge of the diseases of these regions, and of their relationship to disease of other parts of the body, than is at present usually possessed by the practitioner, would be of great value both to him and to his patients. The article by Dr. A. L. YATES on Painless Maxillary Sinusitis, published in our issue of last week, and that by Dr. T. B. JOBSON on Unsuspected Nasal Sinus Disease in this number, are witnesses of how easily common intranasal diseases may be overlooked by those who have not been taught to expect them, and how various and far-reaching their reactions on distant parts of the body may be.

For the education of those intending to become specialists Dr. TURNER recommends a very thorough course of training, occupying some five years after qualification, of which the first two years, we are glad to see, are to be spent in general training either at hospital or in private practice. He urges that the special hospitals, and special departments of general hospitals, should demand from candidates applying for appointments to the staff evidence that they had undergone an adequate training on the lines that he describes, and he believes that until this is an invariable rule we cannot hope to see a change in the mental outlook of the young specialist towards his training. While we agree that at present no such regular course is followed as that prescribed by Dr. TURNER, nevertheless we think that aspirants for staff appointments to the special departments of our more important hospitals will be found to have worked and studied industriously for fully the period he suggests. Dr. TURNER thinks that the Fellowship of a Royal College of Surgeons on its present basis should not be an essential qualification for appointment to the special departments of a hospital, and considers that this rule induces the prospective specialist to devote the greater part of his time and energy to general surgery; he suggests that the Royal Colleges should grant a Fellowship to the oto-laryngologist on a special basis, after a prescribed course of study, by examination confined to the anatomy, physiology, pathology, and surgery of the territory embraced by the two specialties. It is an interesting point, and Dr. TURNER has rendered a service in ventilating it; we think that many will consider that to abolish the necessity for the ordinary Fellowship would be to destroy that sound groundwork of general surgery which is so essential to the specialist, and that it should not be replaced, though it might be supplemented, by a special examination.

On the education of the teacher, Dr. TURNER makes a powerful plea for better organisation of the clinics and special departments, so as to make time and opportunity for teaching on a larger scale; in the clinic better team-work, closer coöperation between the various departments of the same hospital, and more coördination between special hospitals and departments throughout the country, and even throughout the Empire. He urges that, as a preliminary, all clinics should adopt one and the same system upon which to classify the diseases of the specialty, and, finally, he gives instances of subjects which offer a hopeful field for collective investigation. Dr. LOGAN TURNER has performed a service, not only to his own specialty but perhaps also to others, for all would benefit by improved facilities for education, by better organisation, and by greater coöperation.

THE MINISTER OF HEALTH'S OFFER.

AFTER a real discussion with representatives of the panel executive the Minister of Health has made his final offer of terms for a new contract with insurance practitioners. This offer is in the form of a letter to the Insurance Acts Committee, which has been widely circulated, but which we print again for convenience on page 1047. The Minister was accompanied by his Scottish colleague, so that it may fairly be concluded that the terms apply to the whole of Great Britain. Whether this offer represents, as the Minister hopes, a reasonable and fair basis of settlement "under the present circumstances," can only be determined by those who know what are the present circumstances to which the Minister refers. It seems clear enough that stringent economy is a necessary item of Govern-

ment policy. As part of the new offer the Government actuary is prepared to meet an actuary nominated by the doctors, and if it be clearly shown that there is no more money available, no doubt the insurance medical service will do well and wisely to accept the former of the Minister's alternative offers in paragraph (5). This alternative would fix the capitation fee at 8*s.* 6*d.* for a period of five years, unless the Royal Commission to be appointed should suggest material alteration in the conditions of service. Our Special Commissioner has formed the impression that "under the present circumstances" this offer will be regarded as acceptable by panel doctors in one area at least, although it would be premature to forecast a decision which will have to be taken by representatives of all the panel committees of Great Britain at the special conference to be held on Nov. 14th.

The final discussions with the Minister of Health appear to have been in the nature of real negotiation, and the conditions laid down in the earlier paragraphs of the Minister's letter make it far easier for the doctors to accept with good grace one of the alternative offers. A formula which is set out in paragraph (1) runs as follows:—

"Medical benefit is, with sickness, disablement and maternity benefits, one of the primary benefits under the National Health Insurance Acts. Other benefits are additional and contingent upon the foregoing being first provided. The question, what is the proper amount of remuneration to be paid to the doctors, is one to be determined on its merits by the Government after due inquiry and after negotiation with the representatives of the profession."

This will go far to allay the uneasy feeling that approved societies have manœuvred themselves into a favourable position for taking over the control of medical benefit. The formula is something like a pledge, which we desired to have from the responsible Minister, that this fear was ill-founded. The economy campaign, it is now seen, created a real danger of separation of the insurance service from the rest of the health services of the Ministry. Self-supporting and self-contained, the service would be at the mercy of the men who are now telling the public that the Minister of Health's offer will deprive insured persons of their legal rights. For this reason we have set out alongside the offer, and at the risk of vain repetition, what it was that happened in 1911; for the same principle is now involved, and, if it is to be overthrown in 1923, the reversal of policy must be made by authority of Parliament after weighing all the relevant facts, and not by any form of administrative action.

The promise of a Royal Commission gains importance in view of the Premier's statement at Swansea on Oct. 30th, that instructions had been issued for a far-reaching inquiry into the manifold possibilities of social insurance. This declaration seems to foreshadow a wider scheme of protection for the worker against sickness, accident, unemployment, and poverty in old age. In spite of the prevailing industrial depression the existing unemployment insurance has recently been shown to be solvent. We may hope that the Royal Commission will see its way to review this wide field of social insurance in so comprehensive a manner as to include the reform of the Poor-law, and to secure its machinery of medical relief for the purposes of a complete health insurance scheme. The delay in the transfer of Poor-law medical institutions is hardly tolerable. Finally, the increased mileage grant to the rural practitioner will help to solve the knotty problem of working expenses in sparsely populated areas. The wonderful solidarity of panel doctors, with the support behind them of all other branches of the profession, has, we feel sure, been a potent factor in producing the greatly improved situation. The Insurance Acts Committee may be congratulated upon the loyal support which it has received, and on the large measure of approval shown in the public press of the country. As one of the most friendly of our daily contemporaries has put it, a settlement on the lines of the Minister's final offer would end the acute phase of the panel controversy and enable difficulties which have arisen to be examined quietly and efficiently. The precise fee which it is just and possible to pay to the panel doctor is only one of the difficulties to be considered.

INSULIN HYPOGLYCÆMIA: DANGERS AND PRECAUTIONS.

THE advantages of insulin in the treatment of diabetes mellitus are now well recognised; the dangers, although they have been described, are not so well recognised, partly because the treatment has been confined to comparatively few patients who have been under fairly close supervision. The most striking effect of an injection of insulin is the reduction which takes place in the amount of sugar in the blood. It has been shown that when the blood-sugar of a rabbit falls below 0·05 per cent. the animal has a convulsion which may be of quite a short duration or which may kill the animal. This phenomenon has provided a useful basis for the standardisation of insulin. The quantity of insulin which will depress the blood-sugar of a rabbit weighing about 2 kilos below 0·05 per cent. in two hours is called three units. The exact cause of the convulsion is not known, but it is connected in some way with the amount of sugar in the blood since it can be checked in a few minutes by the subcutaneous injection of some grammes of dextrose. The rabbit then seems as well as ever, provided that the dose of insulin was not too big and enough sugar was given. Similar remedial effects can be produced by injecting either adrenalin, which raises the blood-sugar, or pituitary extract. In human beings the symptoms of overdosage are various. They do not, as a rule, occur unless the blood-sugar is less than 0·05 per cent., although they may occur when the blood-sugar is still as high as 0·09 per cent. The commonest symptom complained of is a feeling of inertia or lassitude, sometimes accompanied by slight dizziness, about three to four hours after the injection. This is often accompanied by sweating and abdominal pain, which is described as similar to a hunger pain. Tremor of the hands is often complained of and numbness of the hands, face, or tongue; diplopia may also be present. All these symptoms, although very unpleasant, do not put the patient in any danger of life. They may be relieved by giving, at once, a hot drink or some of the food which would have been eaten at the next meal. It is not necessary or desirable that patients should take sugar in order to relieve these symptoms. During the preliminary period of treatment in which the correct dose of insulin is being ascertained some slight symptoms are often unavoidable, but once the blood-sugar is normal and the size of the dose settled the patient should not experience any such symptoms.

The dangerous symptoms are: (1) a state of unconsciousness and (2) convulsions of a peculiar kind. The unconscious state is very alarming, and although it usually occurs after some of the milder symptoms already described it may take place in their absence. Unconsciousness may develop while the patient is talking or eating (just as a person may fall asleep

while doing these things), and the state is very similar to one of deep slumber, from which, however, the patient cannot be roused, the breathing, pulse, and colour all being good. Although the rabbit has convulsions it was at one time thought that human beings did not suffer from them. The case described by Dr. C. M. HINDS HOWELL in THE LANCET of Nov. 3rd (p. 1007) is certain evidence of their occurrence. Moreover, in a pamphlet[1] which has just reached us through the Rockefeller Foundation convulsions find a place between aphasia and collapse in a list of symptoms likely to follow an uncorrected overdose. Although the condition is so easily relieved by the giving of sugar, it is one which calls for a widespread knowledge of the symptoms and treatment. It is certain that a patient who is taking more than 15 or 20 units of insulin and going about his occupation would be well advised to carry four or six lumps of sugar in his pocket, either dry or dissolved in water, in order to be ready for emergencies. This precaution will, by the way, add to the temptations of the dieted patient. It would also be well if the patient would carry a card about in a pocket or round his or her neck stating that he or she suffers from diabetes, is taking insulin, and has some sugar in a pocket. This precaution is suggested by the prospect of a doctor being called to see a patient who is either unconscious or having convulsions. If he did not know that the patient was taking insulin it is extremely unlikely that he would diagnose the cause of the condition correctly. A dose of sugar, either four or six lumps, dry or in solution, should be ample to restore the patient, provided that he can swallow. If not, a subcutaneous injection of adrenalin, 1 in 1000, minims 15, will restore the patient to consciousness within about five minutes. Sugar should be given afterwards in order to prevent any fear of relapse. If no adrenalin is at hand, pituitary extract, 1 c.cm., will also act very promptly. If neither of these is available, it will be necessary either to give the sugar by means of a stomach-tube or to inject about 20 g. of dextrose (5 per cent. solution) intravenously. In order to avoid the possibility of these dangerous symptoms arising the dose of insulin should always be moderate in size, and if larger doses than 20 units are being given the patient should certainly take the precautions described. The actual size of the dose which will be liable to cause dangerous symptoms will, of course, vary with the weight of the patient, the amount of sugar in the blood, and the amount of carbohydrate eaten after the insulin. When a patient has taken a large dose of insulin—say 30 units—and has eaten a definite amount of bread he does run a certain risk in that the bread may not be absorbed or, apparently after exercise, as in the patient whom Dr. HOWELL saw, may not be sufficient. One of the early causes of overdosage has fortunately been removed by the care with which insulin is now standardised under the auspices of the Medical Research Council.

It is not desired to deter any patient from having insulin, but rather to draw attention to the dangers in order that they may be avoided and that precautions should be taken in order to make the treatment a safe one. Forewarned is forearmed.

A NEW THEORY OF THE ATOM.

THE termination of Sir HUMPHRY ROLLESTON'S tenure of office as President of the Rontgen Society during the twenty-fifth anniversary of its foundation was marked last Tuesday by the announcement of the incoming President, Sir OLIVER LODGE, of a new theory of the atom. He presented it as the sketch of an hypothesis to be criticised by physicists and assumed the nucleus (or proton) of the atom to be in rotation about its axis at a speed comparable with the velocity of light, thus giving it its large mass, some 1850 times that of the electron. He surmised that the normal ether contained its constitutional rotation, and that upon this, when a pair of electric units were being somehow generated, two equal and opposite rotations were superimposed, one opposing the original rotation and giving the net result zero and the other in the same direction giving a result slightly nearer to the velocity of light than before. Round the nucleus there might be an ethereal circulation essential to the existence and behaviour of the nucleus, very intense close to and decreasing with the distance according to the vortical or ethereal law, which would have, however, nothing to do with the laws of gravitation or electric force. It was possible to conceive of strata, where the speed would obey astronomical laws, or of gravitational or electrical levels. An electron would be carried forward by the fluid at that position that satisfied its own requirements. It would be attracted to the centre in a way that the fluid was not attracted, but would have sufficient tangential velocity to counterbalance the attraction. As by hypothesis the electron was only a modified part of the fluid, the revolution it would experience would not be one involving acceleration and consequent radiation, but it would abandon itself passively to the fluid. The levels would not occur at regular intervals, but in such orbits when the vortex velocity and the electronic velocity were of the same value. Intermediately there would be no equilibrium, and the electrons would fly out or in according to circumstances.

Sir OLIVER LODGE'S address dealt with the stages by which knowledge of atomic structure had been attained. After pointing out how and why X rays and their use in connexion with crystals had made an epoch in atomic research, he remarked on the fortunate chance whereby the silver salts on a photographic plate were sensitive to the rays. MOSELEY'S work, which showed how the elements were stepped up in simple arithmetic progression, had brought the theory of discontinuity right into the heart of the atom, and it was remarkable to note the way in which arithmetic conceptions were entering into physics when such natural units as atoms and electrons were employed. He protested, however, at the attempt to introduce the idea of discontinuity into space and time. The discovery of the quantum did not displace the laws of mechanics which still held. Discussing X rays from the medical standpoint, he noted that the radiation depended entirely on the nature of the luminous stimulus, and remarked how the recent progress of physics had made it possible for X ray workers to analyse the nature of the rays and make use of them for the purposes for which they were most suitable. He expressed a very marked preference for the kinetic atom of the physicists as contrasted with the static atom of the chemists.

[1] Ietin (Insulin Lilly). Revised Oct. 15th, 1923.

WE regret to announce the death of Dr. Thomas Henry Green, consulting physician to the Charing Cross and Brompton Hospitals, and author of the well-known manual of pathology, which occurred at his home in St. Albans on Monday last, Nov. 5th, in the eighty-second year of his age.

Annotations.

"Ne quid nimis."

THE LONDON FEVER HOSPITAL.

IN years when the metropolis is free from serious epidemics the London Fever Hospital is apt to escape public notice. Like other hospitals under our voluntary system it has its common difficulties in the shape of high rates, increased prices, and the incidence of heavy taxation upon those classes which would normally furnish its supporters and its patients. In addition, it has its special difficulties in competing against rate-aided institutions. The Metropolitan Asylums Board can open, close, or change the character of its various establishments at discretion according to temporary requirements. The London Fever Hospital must continue to offer the specific facilities for which it was founded, and, unless adequate support is forthcoming in lean years, it must incur cumulative losses which in time may be fatal to its existence. Financial support, of course, is essential, but the need of money contributions is not so acute if the medical profession will give the equally valuable support of sending patients to be treated there. Not for one moment is there the slightest idea of underestimating the admirable treatment given in rate-supported institutions if we venture to suggest that there must be large classes of Londoners who do not wish for gratuitous treatment in Poor-law hospitals or at the expense of the rates. There must be many who at the same time are anxious to avoid the full cost as well as the risk and inconvenience of being treated for infectious illness in their own homes. And, though there are no class distinctions in medicine, there may be middle-class patients for whom the irksome period of convalescence will pass more cheerfully in a hospital where others of their kind are treated than in an institution open to all comers.

It has been suggested that the London Fever Hospital is not sufficiently well known to the practitioner. If this be so, it may be explained that this hospital was founded as long ago as 1802, being the first to be opened in London for the treatment of infectious fevers. It accepts for treatment and isolation patients suffering from all such fevers, including influenza, pneumonia, rheumatic fever, encephalitis lethargica, and cerebro-spinal fever, but not small-pox. It provides ward accommodation at 5*s*. to 7*s*. a day, as well as treatment in private rooms from 6 guineas a week, for scarlet fever, measles, German measles, and diphtheria cases, and the charges do not seem unreasonable. A doctor, it is true, though aware of the existence of these facilities, may yet feel a natural disinclination to lose sight of his patients by sending them off to Islington. He can, however, visit them there at any hour convenient to himself, though in practice it is probable that a single visit will be sufficient to reassure, since in addition to its resident medical officers the hospital has always been generously served by distinguished physicians from outside. Relatives, too, can visit patients in private rooms or wards, though for obvious reasons they are not advised to do so.

With the special facilities to subscribers—a form of insurance for householders—we are not now concerned. We are not addressing the subscribing public but the medical practitioner. If it be true that doctors are not fully aware of the existence and record of the London Fever Hospital, we commend to their notice an excellent institution which, if its beds stand empty much longer, is in serious peril of extinction.

THE BLOOD IN PSORIASIS.

Dr. Albert Strickler, professor of dermatology and syphilology, and Dr. Eugene Asnis,[1] professor of pathology and bacteriology of the Temple University Department of Medicine, Philadelphia, remark that although psoriasis is one of the commonest dermatoses, its specific cause and cure are still unknown. They point out that the bacterial theory of its origin to which they subscribe is supported not only by the clinical symptoms but also by the results of examination of the blood. A differential blood-count made by them in 27 patients suffering from psoriasis, which varied in type, severity, and extent, showed that 14, or 54 per cent., had a lymphocytosis of 35 per cent. or over, which was always at the expense of the polymorphonuclear leucocytes. The remaining white cells were all practically within the normal ratio. An examination of the blood smears was then made by Fontana's method to find some form of spirochæte, but with entirely negative results. Finally the Wassermann reaction was tested in 34 cases of psoriasis, two antigens being employed—viz., the alcoholic extract of human heart and the same antigen fortified by cholesterin. The anti-sheep hæmolytic system was used. The results were again negative in all cases. Commenting on their investigations the writers come to the conclusion that as marked lymphocytosis is often found in chronic infectious processes of both bacterial and parasitic origin, such as tuberculosis or trichophytosis, the presence of lymphocytosis in psoriasis is another sign-post pointing in the direction of bacterial origin for this common disease.

[1] Archives of Dermatology and Syphilology, October, 1923.

PROSTATIC DISEASE IN OLD MEN.

A PAPER by Dr. E. Platou in *Norsk Magazin for Laegevidenskaben* for October is an epitome of the advances made during the last ten years in the operative treatment of adenoma and carcinoma of the prostate. His material consists of 198 cases under the care of Prof. P. Bull between Jan. 1st, 1913, and Jan. 1st, 1923. There were 26 deaths and 117 cases in which a radical operation was performed, the 10 deaths among the patients operated on being equivalent to an operation mortality of 8·5 per cent. There were 152 cases of adenoma and 46 of carcinoma. It was somewhat remarkable that there was so little difference in the immediate mortality in these two classes; there were 19 deaths among the patients with adenoma, and seven among the patients with carcinoma, the mortalities being 12·4 and 15·2 per cent. respectively. These figures represent deaths in hospital, and when the late results of treatment are studied the chances of recovery are seen to be much greater for patients with adenoma than for those with carcinoma. Of the 152 patients with adenoma, 99, or 65·1 per cent., were discharged as cured, whereas only eight of the 46 carcinoma patients were discharged improved, three of them being found to be without signs of recurrence three years later. The ages of the patients in the two classes were practically the same, the average being 68·4 years for the patients with adenoma, and 69·7 years for the patients with carcinoma. But there was a marked difference in the average duration of the symptoms before the admission of the patients to hospital; it was four years and nine months for the patients with adenoma and only a year and a half for the patients with carcinoma. With regard to sepsis, it was observed that uneventful recovery often occurred in cases in which the urine was infected before the operation, whereas originally sterile cases sometimes showed severe post-operative sepsis. In more than half the number of cases (53·3 per cent.) the urine was infected before the operation, and Dr. Platou has come to the conclusion that the importance of an infected bladder before operation has been much overrated. In 40 cases the "rest" nitrogen in the serum was estimated, and in 28, or 70 per cent., it was found to be above normal. This test has proved an invaluable guide in deciding when to operate, and it is Prof. Bull's practice to wait till conservative measures have restored the "rest" nitrogen to normal before enucleating an adenoma. When the "rest" nitrogen content of the serum is very high he does not even attempt a cystostomy, but contents himself

with passing a catheter twice a day, taking care not to evacuate the bladder completely till the functions of the kidneys have been at least partially restored. He has discontinued the use of a permanent catheter after operation, having found that, among 20 cases thus treated, there were as many as seven in which epididymitis, and three in which severe urethritis developed, whereas among 20 patients treated without a permanent catheter there was only one who developed epididymitis. The operation he prefers is the two-stage suprapubic operation under sacral anæsthesia with novocaine. Of 108 radical operations, 79 were performed in two stages and only 29 in one. The mortality rate of the two-stage operation was 7·6 per cent., and that of the one-stage operation 10·3 per cent. The fact that about 13 per cent. of all the cases of disease of the prostate in old men terminate fatally in hospital, whether the treatment be operative or conservative, clearly shows that, when urinary symptoms overtake elderly men, the expectation of life is appreciably shortened.

THE OCULO-CARDIAC REFLEX IN MUMPS.

IN a recent communication to the Medical Society of the Paris Hospitals, Dr. René Benard [1] refers to a paper by Margarot, who found the oculo-cardiac reflex present in 90 per cent. of his cases of mumps, though it was found in only 62 per cent. of normal subjects. This high figure is explained by Margarot having regarded as a positive reaction a diminution of only 6–8 beats a minute, which was present in two-thirds of his cases. Dr. Benard, on the other hand, who has examined the reflex in more than 50 cases of mumps, has come to the following conclusions. Mumps normally causes a pronounced bradycardia of the sinus type, but does not predispose as might be expected a priori to an increase of the oculo-cardiac reflex, which, on the contrary, is much rarer than in normal subjects of the same age. The conclusion may therefore be drawn that mumps reduces the susceptibility to this reflex. In cases where the oculo-cardiac reflex was obtained a much longer ocular compression was required than in the normal subject to produce it. Apparently, therefore, the permanent hypertonus of the vagus characteristic of mumps prevents any fresh stimulation. In 50 per cent. of Dr. Benard's cases the pulse did not vary in the course of the test. In only two did it fall below 50 after ocular compression; in 25 per cent. it was between 50 and 60, in one case between 60 and 70, in 12 per cent. it remained normal (between 70 and 80), and in 20 it exceeded 80.

EXPERIMENTAL HERMAPHRODITISM.

Dr. Wilhelm Krause,[2] of Reval, has succeeded in repeating Steinach's experiments on feminising male guinea-pigs by means of ovarian transplantation, although he has modified Steinach's technique by implanting the ovaries into the testicle instead of into the subcutaneous, intramuscular, or subperitoneal tissue. The main object of these investigations was to ascertain whether the action of the hormone derived from the implanted organ was dependent on the relative amount of ovarian and testicular tissue present, consequently he varied the proportion of ovary to testis as follows: Two ovaries were implanted into one testis, the other testis being removed; one ovary into each testis; one ovary into one testis, the other being left intact; half an ovary into one testis, leaving the other untouched, thus giving proportions of ovary to testis of 2 : 1, 1 : 1, ½ : 1, and ¼ : 1. Out of 44 experiments (of which 11 animals, unfortunately, died in the cold weather) 12 have, up to date, given positive results. Two to four months after the operation an unmistakable hypertrophy of the nipples became apparent, reaching, in one to seven months after the onset of growth, a maximum of 7 mm. in length, which is the normal length in a lactating female, whereas the normal length for a male does not exceed 1–1½ mm. The form of the mammary gland also took on the characteristics of a female, broad at the base, tapering cone-shaped to the apex. After a further three to four weeks the organ became smaller again but never regained its original size. Out of the positive cases, two belonged to the series in which the proportion of ovary to testis was ½ : 1. Sufficient time has not yet elapsed to show whether all the 33 animals will give positive results, but it can already be said that those with the low proportion of ovary are not behind the others in producing the characteristic changes. Thus the quantity of ovary does not appear to influence the effect of the hormone. At post-mortem examination the testicle operated on was found to be smaller than normal, but spermatozoa were present in the epididymis, and the seminal vesicles and prostate were normal. The contents of the seminal vesicles coagulated in the normal time, whereas it has been shown by Gley that in castrated animals the fluid loses its coagulability. Macroscopic examination of the testicle showed no normal ovarian tissue, although degenerated cystic tissue could be demonstrated. The results of microscopical examination are to be announced later.

[1] Bulletins et mémoires de la Société médicale des Hôpitaux de Paris, 1923, xlvii., 708.

[2] Deutsche med. Wochenschrift, Oct. 19th, 1923.

THE CAUSES OF CHRONIC INVALIDISM.

SWEDEN is a country where every person, with an income below a certain limit, is entitled to a pension when ill-health or age inflicts permanent incapacity for work. In 1918 such pensions were given to 14,607 persons, of whom 5538 were men and as many as 9069 were women. A study of the morbid conditions qualifying these persons for pensions has recently been conducted[1] by Dr. G. Kahlmeter, consulting physician to the Government department which deals with these pensions. A medical certificate indicating the nature of the disability from which a prospective pensioner is suffering must show what the nature of this disability is, and it is interesting to note that in middle age women are much more subject to crippling by articular rheumatism than men. The fact that the ratio of women to men was as 1·6 to 1 was largely due to this factor; even when a correction was made to allow for the excess of the female over the male population the ratio of women to men was yet 1·5 to 1. This "super-invalidism" of women was not evenly distributed in the different age-groups. Beginning at the age of 40, it became still more evident during the following decade, reaching its maximum between the ages of 50 and 65. In this period the ratio of pensioned women to pensioned men was as great as 2 to 1. After the age of 65 the difference between the two sexes was much less marked, and it would seem that middle age is the period in which the wage-earning woman is most susceptible to the wear and tear of life. In 58·2 per cent. of the pensioners of both sexes the age of 65 had been passed, and only 15·2 per cent. were between the age of 60 and 65. Senile debility and arterio-sclerosis were the diseases qualifying for a pension in 55 per cent. of all the cases, and the disease coming next in the order of frequency was articular rheumatism, which existed in 9·1 per cent. of all the pensioners, 7·2 per cent. of the men and 10·2 per cent. of the women being given a pension on account of this disease. Pulmonary tuberculosis, on the other hand, qualified considerably more men than women for pensions, 7·9 per cent. of the pensions for men being on account of pulmonary tuberculosis, as compared with only 4·6 per cent. in the case of women. Among the pensioners under 45 pulmonary tuberculosis was the most common cause of invalidism, and in the younger age-groups epilepsy, valvular disease of the heart, and mental disease figured most prominently. The age of 40 to 45 was the age of predilection for articular rheumatism. It is curious to find such well-known diseases as ulcer and cancer of the stomach, asthma, chronic bronchitis, and organic disease of the nervous

[1] Acta Med. Scand., 1923, lix., 153.

system playing such a comparatively modest part in these statistics, which constitute a useful supplement to mortality statistics.

THE ORIGIN OF HERNIA.

THE Mitchell Banks Memorial Lecture was delivered, on Nov. 1st, in the University Surgical Theatre, Liverpool, by Sir Arthur Keith, who took as his title the Origin and Nature of Hernial Formations. After alluding to the frequency of hernia, he controverted the theory that all hernias were of developmental origin, and proceeded to show that, in the case of femoral hernia at least, there is no evidence of a truly congenital process of peritoneum ever being found, while the factors present are those associated with hernial formation due to pulsion from within. Chief amongst these are local weakness of the abdominal wall at a point where it is pierced by vessels, and the increase of intra-abdominal pressure caused by even the slightest muscular strain. Illuminating parallels were given in the herniæ of the mucosa at the orifice of the bile-duct near the duodenojejunal flexure and in the sigmoid colon. Passing next to the subject of inguinal hernia, the speaker described the descent of the testis as a process of growth, and in no sense a pulling down by muscular contraction. The lower portion of what has been known as the gubernaculum testis he prefers to call the "inguinal strand," as it never fully develops into muscle tissue. Sir Arthur Keith looks upon it as the representative of the suspensory muscle of the marsupials. The true gubernaculum follows the track formed by this inguinal strand, and as it goes replaces it by newly developed cells. The essential element in the prevention of inguinal hernia is the unimpaired action of what the lecturer would like to call the "inguinal shutter"—that is, the lower arched border of the internal oblique contracting, straightening, and so descending over the internal ring, like the upper eyelid over the eye. This action is an unconscious reflex preceding voluntary effort of any kind, and may be interfered with by any abnormal abdominal condition. Once a sac has formed, nothing short of its removal will allow the shutter to work, or, as Sir Arthur Keith graphically put it, "until you take your coat-tail out of the hinge you can't shut the door." Finally, in reference to the medico-legal aspect of hernia, the lecturer lent the weight of his authority to insist on the extreme rarity of any truly traumatic hernia—that is, of a hernia the result of actual tearing of tissues by a single sudden violence.

SYPHILITIC CHANCRE OF THE VAGINA.

Dr. Paul Lhuillier[1] devotes his Paris thesis to a consideration of syphilitic chancre of the vagina, the rarity of which he illustrates by the following statistics. Among 249 cases of syphilitic chancre in women Fournier noted only a single example of vaginal chancre, and even that was doubtful. In the late Prof. Gaucher's service at the St. Louis Hospital in Paris, out of 1182 patients observed in the course of ten years in whom the chancre was definitely localised, Bobrie de la Rochelle found only four instances of chancre of the vaginal wall. Dr. Lhuillier himself has collected 12 cases from the literature, in addition to two which are original. In only nine, however, was the localisation of the chancre exclusively vaginal, the others being examples of chancre of the vulvo-vaginal region. The comparative immunity of the vagina in this respect, which may be compared with the immunity of the face from chancroid, scabies, and psoriasis, of the œsophagus from diphtheria, and of the upper respiratory tract from thrush, has not hitherto received any satisfactory explanation. In the great majority of cases vaginal chancre is situated in the posterior third or anterior third of the canal, while it is very rarely found in the central portion. In shape it is usually round, but it may be oval or irregular in outline and vary in size from a few millimetres to a five franc piece. Contrary to the prevalent opinion, the induration is sometimes so ill-marked as to be hardly appreciable even by the most experienced examiner. It is usually of short duration, quite superficial, and rapidly disappears under treatment. Syphilitic chancre of the vagina is quite painless, and can be pressed with the speculum without causing any discomfort. According to Ricord, the characteristic adenopathy is found in the groin when the anterior third of the vagina is affected, and in the pelvic glands when the other two-thirds are involved, but subsequent observers have noted that the adenopathy is inconstant. Dr. Lhuillier recommends that in every doubtful case of vaginal ulceration a search should be made for Ducrey's bacillus and the *Treponema pallidum*, and that the Wassermann reaction should be performed every fortnight up to 50 days after appearance of the lesion. If the result is positive, active treatment by intravenous injections of arsenobenzol should be instituted.

[1] Thèse de Paris, 1923, No. 62.

THE MENTAL INEFFICIENT: "TREATMENT" OR "PUNISHMENT"?

THE city of Birmingham has in some measure realised the vision of Dr. A. E. Naish, who, on the opening page of our present issue, forecasts the rôle of medicine in deciding many questions involving moral conduct. In the "Birmingham Scheme"—as it is now frequently called—the justiciary court refers for special medical examination a certain type of delinquent, who can neither be classified as mentally defective nor as insane, but in whom "mental instability is exhibited either by conduct, attitude, or bearing, or oft-repeated commission of the same class of offence or other abnormality"—persons, in short, who cannot adapt themselves to the requirements of civil life. The examination is carried out by two colleagues, Dr. Hamblin Smith, medical officer of the prison, at which special facilities are provided for the purpose, and Dr. W. A. Potts, psychological expert to the justices. The scope of their work has already been outlined by Dr. Potts in THE LANCET,[1] and the methods employed in testing the mental capacity of cases referred to them were detailed recently in these columns.[2] The scheme was inaugurated just after the war and the results have proved the value of the experiment, about 150 cases being examined per annum. This number has remained fairly constant, as the justices recognise the difficulty of justifying any indiscriminate remanding of offenders, even if it were thought desirable.

In the report for the year 1922–23 by the two medical officers pointed attention is called to the fact that of the cases specially remanded it was found necessary to sentence only 20 per cent. to imprisonment. Dr. Hamblin Smith continues: "Even when every allowance has been made for the fact that some of the cases would not have been sent to prison in any event, the figures are more impressive than any words as to the immense social value of the scheme. The constant requests which I have had for information, not only from this country, but from all parts of the world, indicate the interest which is taken in our methods, and suggest that the scheme is, as it was intended by its originators to be, a real advance in legal procedure. But our natural satisfaction must not be allowed to cause any relaxation of our efforts, nor must we forget the work which still remains to be done. We must continue to examine as many cases as is possible. Only in this way can we have any prospect of obtaining the knowledge which is so urgently wanted as to the prevention and cure of that social disease which we call 'crime.' We can make no progress unless we study causations, and this study can only be pursued by the intensive investigation of individual offenders. In dealing with any case,

[1] THE LANCET, 1922, ii., 1365.
[2] Ibid., July 21st, 1923, p. 112.

a court is quite in the dark as regards the most important factors, until information is before it as to the mentality of the offender. This information can be obtained in no other way than by the use of medical examiners who possess the requisite experience. There is no type of case which is not worth investigation in this way. But I would call attention to two classes of offenders who are specially deserving of patient study. The desirability of the thorough examination of young offenders is now generally recognised, and there is also the offender who commits 'sexual' crimes, in whose case the mental conditions which may be found are varied in the extreme. I would urge that every case of this latter form of offence should be specially examined. I have been greatly impressed with the value of friendly interviews with the younger prisoners; most valuable information can be had in this way, not only as to the particular case, but also as to the causes of delinquency in general. It is to a doctor that the ordinary offender will talk most freely. This fact, for which there are many reasons, is constantly brought before me in my work.

"Insane persons have long been regarded as requiring treatment instead of punishment. In comparatively recent years the mentally defective offender has been removed from the ordinary operation of the criminal law. But there are other classes of mentally abnormal persons which are quite well recognised by scientists, and which require treatment on special lines. Recognition of this fact in no way implies that these persons are to be allowed to do whatever they please, without interference on the part of society, any more than is now the case with insane or mentally defective persons. In their own interests, as well as in those of society, persons who suffer from these abnormal mental conditions require most careful treatment. The point is that our present method of dealing with them by imprisonment is inadequate, and, in many instances, futile. The whole problem of delinquency is a psychological one, and when once this is generally recognised I believe that public opinion will call for a revision of our present methods of dealing with offenders."

A little imagination shows the economy of dealing thoroughly the first time with a potential criminal, even if his study involves the examination of a number of cases who ultimately show nothing more than can be discovered by examination in court. "Psychological treatment" is not a synonym for leniency, as many laymen would believe. It represents rather the outcome of the desire to save lives which might be useful to the community, and as such it stands together with all other branches of prophylactic medicine.

THE REGISTRAR-GENERAL'S STATISTICAL REVIEW FOR 1922.[1]

THE issue of Part I. of the chief vital statistics of England and Wales for 1922 within ten months of the year to which they relate is a sign that the Registrar-General's statistical work is tending to function normally once more. Although we regret the failure of the text commenting on these tables to appear simultaneously, the present volume includes information of extreme value to physicians, and especially to medical officers of health. The average experience of the entire country is indicated by the fact that the birth-rate was 20·4 per 1000, a lower figure than in any preceding year except three of the war years; and by the death-rate of 12·8 per 1000, which, with the exception of 1921, is also the lowest on record. The rate of infant mortality was 77 per 1000 births, the lowest rate in any previous year having been 80 in 1920.

Perhaps a chief use of the tables in this report is for medical officers of health of counties and county boroughs in enabling them to compare the relative position of their areas in respect of the chief causes of death. A few extreme cases may be taken in illustration. Among county boroughs the death-rate per million from enteric fever varied from 41 in Blackpool, 52 in Dudley, and 40 in Plymouth to nil in 16 county boroughs, a difference which calls for much serious investigation in the boroughs named, and in others which approximate to their position. The death-rate from respiratory tuberculosis was 611 in Southport and 1250 in South Shields; 681 in Wolverhampton and 1364 in Warrington; 761 in Bolton and 1321 in Liverpool; 732 in Lincoln and 1321 in Manchester. These differences are most striking, and can scarcely be explained solely on an industrial or social basis. Similarly the death-rate per 1000 births from diarrhœa and enteritis under two years varied from 2·85 in Bath to 12·56 in Birkenhead; from 2·68 in Burton-on-Trent to 7·67 in Burnley; from 2·96 in Exeter to 11·06 in Gateshead; from 3·14 in Ipswich to 15·31 in Kingston-upon-Hull. These immense variations call not only for much heart-searching on the part of the local authorities concerned, but for active local investigation on scientific lines, with a view of ascertaining means for reducing the excessive death-rates towards the level of the rates in the more fortunate or better governed boroughs. Similar remarkable discrepancies are seen in the death-rate from puerperal sepsis (per 1000 births). This was 0·92 in Blackburn, but in Bolton was 2·05. In Bradford it was 3·26, in Bury 4·26, and in Chester 4·62, but in Coventry it was only 0·82, and in Darlington 0·66. Are these differences entirely accidental, or can they not be related to differences in the standard of the midwifery service available in the respective areas?

Similar questions suggest themselves when we turn from special diarrhœal mortality to total infant mortality under one year of age per 1000 births. Why should this be 62 in East Ham and 113 in Burnley; why 73 in Warrington, 76 in Huddersfield, and only 61 in Wallasey; why 113 in Walsall and in Wigan, and 70 in Swansea? Factors are complex and difficult of discrimination; but careful comparative inquiry can give indications adequate for reform; and there is no reasonable doubt that the high infant death-rates can be lowered approximately to the level of the lowest rates in the Registrar-General's tables. To point the need for inquiry and subsequent reform is among the chief ways in which our national vital statistics can be made of practical value.

[1] The Registrar-General's Statistical Review of England and Wales for the year 1922 (New Annual Series No. 2) Tables, Part I., Medical. 15s.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE thirty-sixth annual meeting of the Fellows and Members will take place on Thursday next, Nov. 15th, at the Royal College of Surgeons of England, at 3 P.M. Dr. Sidney C. Lawrence, the hon secretary of the Society, has circularised the Members and Fellows of the College resident in the greater London postal district area, urging their presence to support two resolutions to the following effect: First, that the admission of Members to direct representation on the Council of the College is desirable; and secondly, that the President should be requested to make a statement as to the difficulties, legal and otherwise, which prevent such direct representation of Members on the Council. The officers of the Society, in drawing attention to their objects, take the opportunity of protesting against the view that their action is due to a desire to obtain representation on the Council for their own supporters. The circular note indicates that other matters to be brought forward at the meeting will be the absence from official lists of the diploma titles, and the slur upon the status of the Members due to the absence of a hood from academic dress. It is felt that the right of the M.B. of any University to wear a hood upon public occasions creates a distinction which is not warranted. The general objects of the Society may be described by saying that it is desired to arouse and maintain amongst Members an interest in the College, and to obtain a new charter which will give them representation upon the governing body.

Modern Technique in Treatment.

A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.

XLIV.

THE TREATMENT OF INTERNAL DERANGEMENT OF THE KNEE-JOINT.

INTERNAL derangement of the knee-joint in a large majority of cases means an injury and displacement of the internal semilunar cartilage. This accident may occur at all ages, though it is rare before adolescence; it is naturally more frequent in early adult life during the period of greatest activity. The initial injury is a twisting strain upon the flexed knee. In many cases this initial injury is a severe one, but in some a comparatively slight twist upon a flexed knee when the quadriceps is not on guard may be sufficient. The twisting strain first stretches, or even partially ruptures, the internal lateral ligament; this allows the inner condyle of the femur and the head of the tibia to separate a little, so that the cartilage can displace slightly towards the centre of the joint. It is now liable to be split by pressure between the two bones, and when a split has once taken place the fractured cartilage can then be displaced further. An actual displacement of the cartilage can only take place after a split or fracture has occurred. The most common variety of injury to the cartilage is a split round the margin, leaving that portion of the cartilage which forms a free edge in the joint loose and attached only at its anterior and posterior extremities. This variety of split is often called a "bucket-handle" injury. In some cases such an injury affects only the posterior part of the cartilage; in others it extends completely round the margin. Sometimes, either at the time of such an injury or at some subsequent period, this free portion of the cartilage is torn right across at its narrowest point, there being then one or two free tags of cartilage in the joint. The clinical characteristic of a displacement of the internal semilunar cartilage is that following a twisting strain the knee becomes fixed in a condition of partial flexion with external rotation of the tibia (so-called "locking"), and that this fixed position can only be overcome by a manipulation of the knee by the patient himself or by some assistant. Sometimes a temporary or partial locking of the knee occurs, easily reduced by the patient simply flexing and extending the knee-joint. An acute displacement is usually followed rapidly by effusion into the joint. An occasional incident is the occurrence of a chronic or recurrent enlargement of the bursa between the inner head of the gastrocnemius and the semimembranosus; this appears to be often directly associated with an injury of the posterior part of the cartilage.

Treatment of Acute Displacement of the Cartilage.

When the knee has become locked in a flexed position as the result of a characteristic twisting strain the immediate treatment must aim at a reduction of the cartilage back into its original position, or at least into a position in which it no longer interferes with the free mobility of the joint. In most cases this manipulation will be best carried out under an anæsthetic. The object of the manipulation is to open up the space between the femur and tibia anteriorly and on the inner side, and so to enable the cartilage to spring back into position. The surgeon flexes the knee fully, rotating the tibia outwards, gripping the ankle with one hand and the outer side of the thigh just above the knee with the other. From this position the knee is extended suddenly, the thigh being pressed inwards, the ankle being pulled outwards and kept rotated out; the cartilage will then be felt to return into its position with a snap. When the manipulation has succeeded, the next step is to prevent the formation of considerable effusion or to get rid of any effusion already present. This is best carried out by wrapping the whole of the knee from mid-calf to mid-thigh in a thick layer of cotton-wool and bandaging firmly over this with a domette bandage; the elastic pressure thus kept up will often completely prevent an effusion or promote the absorption of an effusion within 24 or 48 hours. There is no need at this stage to rest the knee—in fact, a considerable amount of exercise is useful, provided that no risk is taken of twisting the tibia on the femur. Steps should at once be taken to keep the quadriceps muscle active and prevent it wasting. Daily faradic stimulation to the main mass of the quadriceps and also to the vastus internus is advisable, together with massage of the knee itself and active exercises of the quadriceps. In carrying out these exercises two points are essential: (1) to restore complete flexion of the knee as tested by the ability of the patient to kneel and sit back on to his heels; and (2) to strengthen the vastus internus. The latter muscle has as its chief function to brace up the inner side of the knee and hold the patella inwards when the weight is being taken upon the flexed knee. The muscle should be specially exercised by making the patient tip-toe and then bend the knees until he is in a squatting position, recovering again to an upright position. As soon as any effusion has disappeared and the knee flexes fully, and the quadriceps muscle is as strong as on the other side, all sorts of general exercise may be taken. It is very common for an injury of the semilunar cartilage to occur with complete displacement and locking and for recovery to be complete without any subsequent similar accident happening. For this reason it is undesirable to operate upon a knee for the removal of a semilunar cartilage which has only been displaced once. When the knee has apparently recovered completely it should be used for every exercise that the patient desires to carry out, and tested in this way to see whether the cartilage is likely to displace again.

Recurrent Complete Displacement.

When displacement of the cartilage recurs in a knee which is apparently sound it is best to decide at once upon the removal of the cartilage. Such recurrent displacements tend to recur with less and less cause; the accident may happen in the course of ordinary walking, and may become a danger to the patient. Moreover, repeated attacks of displacement with locking undoubtedly damage the knee-joint, and sooner or later tend to produce osteo-arthritic changes. The operation for removal of a cartilage is usually carried out with a tourniquet applied to the limb. The knee is flexed at a right angle and allowed to hang over the end of the table, and a vertical incision is made on the inner side about three-quarters of an inch from the inner margin of the patella down to the head of the tibia. The capsule is divided vertically as far as the lowest fibres of the vastus internus and down to just beyond the margin of the tibia. When the joint is opened a hook should be passed under the cartilage, the synovial membrane retracted, and the anterior half of the cartilage then inspected. In most cases where the history is clear a fracture around the margin of this part of the cartilage will be found. The anterior extremity of the cartilage is first detached and a heavy clamp with a tooth at the end affixed to it. The margin of the cartilage on the inner side of the joint is then carefully cut away from the synovial membrane and capsule; the posterior part of the cartilage, if it is not detached, may be left in the joint, the split portion being pulled forward and cut away from the sound cartilage posteriorly. In some cases no split is found in the anterior part of the cartilage. When the history is clear this portion must then be detached and pulled upon strongly, the knee being well flexed. The posterior part of the cartilage will then usually be

found to show a split which enables it to be pulled forward quite easily, so that it springs into the centre of the joint (the intercondylar notch); the split portion can then be cut away posteriorly in this notch. In opening the knee-joint and removing the cartilage the most careful aseptic precautions must be taken, the skin being shut off from the wound, and nothing except the extremities of sterile instruments introduced into the joint. Care must be taken both in the original incision and in detaching the cartilage not to divide the internal lateral ligament of the knee. The synovial membrane, capsule, and skin require suture in separate layers. As a rule the wound is sutured and the dressing and bandage applied with firm pressure before removing the tourniquet. Provided that healing is uncomplicated, and that no considerable effusion in the knee occurs, the joint may be moved and used quite soon after the operation. No splint is used; the wound is looked at on the sixth day, and if there is no effusion in the knee-joint the patient is at once allowed to get up and walk on the limb. He is encouraged to carry out active movements of the quadriceps muscle; and electrical treatment of this muscle with massage of the knee and active exercises can be started as soon as the stitches have been removed. In a young adult it is possible to allow a considerable amount of active exercise at the end of a month from the operation. Such forms of exercise as involve risk of twisting—e.g., running, jumping, tennis, and football—should be forbidden until the quadriceps muscle has become quite strong; this may be a matter of two months.

Irreducible Displacement.

It occasionally happens that a cartilage has been injured and displaced and has not been immediately reduced; it may then be a matter of difficulty to reduce it. In any case in which manipulation under an anæsthetic has failed to secure full extension of the joint an operation should be undertaken forthwith, as a cartilage which remains in a displaced position is certain to produce damage to other joint structures. In old-standing displacements it is as well for the surgeon to arrange to manipulate the knee under an anæsthetic, with permission from the patient to operate if the reduction is not felt to be satisfactory.

Partial Displacement of a Cartilage: Cases Simulating Displacement of a Cartilage.

Patients frequently complain of a knee which gives way under them constantly in a flexed position, often with pain and with occurrence of a subsequent effusion but without any complete locking of the joint. In some of these the knee is apparently normal between the attacks, and it may be taken that there is probably a small split in the cartilage, the free portion of which is not large enough to get in the way and lock the joint completely. In many other cases an examination of the knee will show that flexion is not really full, and that the quadriceps muscle, particularly the vastus internus, is not as strong as it should be. In all these cases the best initial treatment is to give an anæsthetic and manipulate the knee by flexing fully, rotating out, and then straightening the knee suddenly. Adhesions will often be heard to snap on full flexion of the joint. Following such a manipulation, the electrical treatment and exercises for strengthening the quadriceps already described should be given until the knee is fully mobile with good muscle power. General exercise should then be allowed, and the knee watched to see if any further accident occurs. If it does, an exploratory operation is indicated. In this class of case an X ray photograph to exclude the existence of a loose body is an essential preliminary of treatment.

R. C. ELMSLIE, M.S. Lond., F.R.C.S. Eng.,
Orthopædic Surgeon, St. Bartholomew's Hospital; Surgeon, Royal National Orthopædic Hospital.

Special Articles.

THE PANEL CRISIS.

THE MINISTER OF HEALTH'S FINAL OFFER.

THE Minister of Health, accompanied by the Parliamentary Under-Secretary for Scotland, met representatives of the Insurance Acts Committee of the British Medical Association on Oct. 30th and 31st and discussed with them the terms of a new contract with insurance practitioners as from Jan. 1st, 1924. In the result the Minister made a communication as follows:—

Ministry of Health, Whitehall, S.W. 1,
October 31st, 1923.

SIR,—I am directed by the Minister of Health to refer to the discussions which have been proceeding between him, with the Parliamentary Under-Secretary of Health for Scotland, and representatives of the Insurance Acts Committee yesterday and to-day on the subject of the arrangements to be made for a new contract for the insurance medical service.

The Minister, appreciating the importance of an amicable settlement on this question, has given it the fullest possible consideration, and has made every effort in his power to realise the standpoint of the profession and to arrive in negotiation with their representatives at a settlement fair to all parties. In the result he authorises me to make the following proposals:—

(1) He accepts the following formula:—"Medical benefit is, with sickness, disablement and maternity benefits, one of the primary benefits under the National Health Insurance Acts. Other benefits are additional and contingent upon the foregoing being first provided. The question, what is the proper amount of remuneration to be paid to the doctors, is one to be determined on its merits by the Government after due inquiry and after negotiation with the representatives of the profession."

(2) An impartial Royal Commission will be appointed to investigate and report on the whole system established under the National Health Insurance Acts, including medical benefit and the remuneration of the practitioner. The terms of reference of this Commission will be agreed with the profession.

(3) Provided the Insurance Acts Committee nominate an actuary of suitable standing, the Government actuary is prepared to meet him in professional consultation with a view to satisfying him that all relevant considerations have been taken into account in arriving at his conclusion as to the maximum which can be charged to insurance funds as from Jan. 1st next.

(4) As regards England and Wales, during the next year a sum of £250,000 will be provided for the mileage fund and to meet other points raised with regard to the rural practitioner by the deputation which recently saw representatives of the Ministry of Health on the subject; the Scottish mileage to be discussed as heretofore with the Scottish Board of Health.

(5) As regards the arrangements for remuneration as from Jan. 1st next, the Minister authorises me to make the following alternative offers:—

(*a*) A capitation fee of 8*s*. 6*d*. to be paid for five years from Jan. 1st next, provided that, if the Royal Commission above referred to during the currency of that period suggests any material alteration of conditions of service, the profession shall be free to reopen the question of remuneration; or—

(*b*) A special court of inquiry will be set up by the Minister as soon as possible and instructed to report on the capitation fee to be paid as from Jan. 1st next. The contract will be made on the basis of the fee recommended by the court of inquiry, the Government undertaking to go to Parliament for the necessary legislative sanction and the profession undertaking to accept the recommendation. The court of inquiry will be asked to report as soon as possible, hearing any evidence tendered on behalf of the Ministry, the profession, the approved societies or other interested parties.

I am to say that the above offer is a final offer, and that it is to be taken as a whole with either alternative (*a*) or (*b*). The Minister hopes most earnestly that the offer may be accepted, and sincerely trusts that the Insurance Acts Committee and the whole body of insurance practitioners will realise that it represents a reasonable and fair basis of settlement under the present circumstances.

I am, Sir, your obedient Servant,
W. A. ROBINSON.

The Secretary, Insurance Acts Committee,
British Medical Association, 429, Strand, W.C.

The representatives of the Insurance Acts Committee stated that they would submit this communication to the panel committees of the country and afterwards to a special Panel Conference to be held on Nov. 14th.

THE ALLEGED APPROVED SOCIETY "CONTROL": WHAT HAPPENED IN 1911.

Not to prolong or exacerbate controversy but to ensure full realisation of a recurrent danger to peace, it is desirable, even at the risk of wearisome repetition, to bear in mind the early history of the relations between national insurance and the medical profession. From the very beginning it was foreseen that the profession would be prejudiced if the financing of the scheme were managed in such a manner that what was given to the doctors could be construed as something wrested from the approved societies. This was the point with which Parliament dealt fully and finally in 1911.

The best friends of the original National Insurance Bill of that year would hardly claim that either the Bill or the explanatory memorandum which accompanied it paid very marked attention to the medical profession's point of view. As Dr. Esmonde observed in Parliament at the time, the doctors were told to underwrite the health insurance of the country without being consulted as to the premium arrangements. There is no need now to assign praise or blame for what happened in 1911. The Bill was unsymmetrical in its conception. It was largely framed on a German design. But, whereas Germany had had a clean slate on which to plot out its scheme, England had already developed a characteristic voluntary system over a part of the area to be covered. It is the English way to adapt old material in making revolutionary changes, and the machinery of the friendly societies was obviously too useful to be scrapped. But the medical arrangements of the pre-1911 voluntary system—recently described by Sir Clifford Allbutt as "the bad and now obsolete club system, the old practice of pulse, tongue, and bottle"—had not been satisfactory to either side. They contained the element of friction which was the legacy bequeathed by voluntaryism to compulsion. The medical profession, as was clearly stated in Parliament by a responsible speaker (Sir Robert Finlay, afterwards Lord Chancellor), was not prepared to see the "control" which the friendly societies had exercised in the old days not only retained in their hands but even vastly extended. Yet, when the 1911 Bill came to be studied it was at once seen that the opportunity of friction was perpetuated. Clause 13 provided that medical benefit, in the case of members of an approved society, should be administered "by and through the society." It was repeatedly pointed out that the societies thus had a strong interest in cutting down medical remuneration in order to maintain or increase their own profits and to make their benefits more attractive. In replying on the second reading debate Mr. Lloyd George declared that all the criticisms of the Bill had been foreseen and that there was no substance in any of them. The doctors were not being "placed under the heel of the friendly societies" at all. Nevertheless the point was afterwards placed beyond doubt. Dr. Addison's amendment to take the medical benefit administration away from the societies and to hand it over to the local insurance committees (at that stage known as local health committees) found ready support on all sides. Some speakers emphasised the necessity of freeing medical remuneration from the grip of the societies, others the undesirability of entrusting the whole subject of health to private bodies unequipped for its adequate supervision. The Addison amendment was crucial; it was frequently stated that unless the point was conceded it was idle to proceed with the Bill. Mr. Lloyd George took the Government whips off, and the amendment was carried by the overwhelming majority of 387 votes to 14. Consequential amendments were made in Clause 14 of the Bill, and, as thus substantially altered, Clauses 13 and 14 eventually became Sections 14 and 15 of the 1911 Act.

This may be ancient history, but history has its lessons. The lesson of 1911 is that Parliament, on the advice of representative Members of all parties and by a huge majority, did what it could to ensure that, in working the new national insurance scheme, the medical profession was to be free from any suspicion of the societies' control. There was still, of course, a danger that the spokesmen of the societies, obsessed by the now discarded traditions of the old club system, would put their case too high, and, if their funds were depleted by the grant of large additional benefits or (as in 1922) by external attack, would claim direct power to squeeze the insurance practitioner. This danger has proved only too real. A recent spokesman has described the apparent intention of the Minister of Health to protect the reasonable remuneration of the doctors as a "misappropriation of trust funds." This impossible language merely shows the need of a clear statement that medical remuneration must be settled on its own merits irrespective of the societies' finances. Sir Alfred Mond, in a speech from which we quoted last week, assured the medical profession that the 1922 legislation made no modification of "existing statutory provisions." In other words, the protection given by Parliament on the Addison amendment in 1911 was not impaired by anything in the Act of 1922. We need scarcely add that there is no reason to suppose that Parliament is of a different opinion to-day. At any rate, if the principle of 1911 is to be overthrown, it must be done by the authority of Parliament and not by any form of administrative action.

THE SITUATION IN EAST ANGLIA.

(FROM A SPECIAL COMMISSIONER.)

THE Eastern Counties took no small part in the early days of controversy over contract practice. A week-end tour of Cromer, Norwich, Lowestoft, and Yarmouth, and conversations with many doctors, have proved a liberal education. An armchair study of the problem, with only the written word as a guide, is apt to conjure up a picture of the panel doctor as a unit, as impersonal in the discharge of his studies as a railway clerk or porter. It is only by travelling from place to place and listening to the experiences of many doctors that a correct opinion can be formed, not merely of the panel service, but of the men behind it. The very status of panel practice varies greatly in different parts. Lowestoft and Yarmouth, for example, lie cheek by jowl geographically. But practically every doctor in Lowestoft is on the panel, and about every other doctor in Yarmouth will have none of it.

It is obvious that the standing of such a young service as that of the panel must suffer when, in a town like Yarmouth, many of the most respected doctors will not work in it. However efficient the panel doctors may be in such a town, the demonstrative abstention of many of their colleagues puts these panel doctors in an invidious position. It would have been unnecessary to labour this rather painful point did it not have a certain bearing on the present crisis. If half the doctors in a town like Yarmouth will not go on the panel when the conditions and rate of remuneration are as at present, is it not probable that, if the panel service is to be modified in a manner distasteful to the medical profession, many of the doctors who now are a credit to it will give it up?

Take the case of the doctor with a large private town practice, a hospital appointment, and special knowledge of one branch of his profession. When all the men of this class in a town are on the panel, receiving perhaps only a few hundred pounds apiece from it, the reputation of the service in such a town is enormously enhanced, and its efficiency is increased in more ways than one. Now it is just this best type

of panel doctor that the service has a precarious hold on. The young doctor who has recently bought a large panel practice is in a position to be sweated, and there is no knowing to what level he could be reduced. But the men of standing, experience, and ability are in a position to say: "We will work in this service only under conditions enabling us to give of our best. If we are harassed by wrangling and shifting conditions of service, we will return to a practice which is entirely non-panel."

This desire for a settlement of a more or less permanent character is patent everywhere. Most panel doctors, if they must perforce decide one way or the other, seem to prefer the Minister of Health's first to his second alternative for the sake of peace, whatever their opinions as to the adequacy or inadequacy of the terms. The gamble is greater in the second alternative. Most doctors, being very busy, have no taste for a gamble of this kind; they prefer a gilt-edged security with a comparatively low rate of interest to speculative investments which need watching and must be a constant source of distraction from their work.

"It is an ill wind . . . .," and it is to be hoped that if this crisis gives birth to a Royal Commission with comprehensive terms of reference, many much needed reforms will be adopted. The man in the street, whose information is obtained only from the lay press, is apt to conclude that reforms are, indeed, urgently needed, but that they must be solely of the nature of concessions from the medical profession. The size of panels must be reduced, freer choice of doctors must be provided, better surgery accommodation must be found, and so on. But the aforesaid man in the street has no conception of the number of points where the shoe pinches the doctor himself. Many of these points are trivial, but their cumulative effect is to be found in the 94 per cent. of resignations. Here is an instructive, perhaps typical case. A panel doctor takes a short but much needed holiday. He spends half of it in bed with the "flu." But those days in bed are in some senses happier than the days spent at home in his panel with its endless routine of minutiæ. In addition to the dull, slogging, clerical work there is the emergency night work—the sudden call coming on top of routine duties. May it not be possible for a Royal Commission in consultation with "the man on the spot" to simplify the clerical work of the panel doctor? A panel doctor your Commissioner interviewed was convinced that the endless notes he has to make on unimportant cases are not only useless but mischievous; they obscure the records of important cases, and it is impossible to see the wood for the trees.

To discuss in detail every grievance of the panel doctor would be impossible in this article. There are troubles in connexion with dispensing, and in seaside towns like Yarmouth and Lowestoft there is the difficulty of the insured visitor. Then there is the newcomer who may be in the district for years before he bethinks him of his card and brings it, or having meanwhile lost it, does not bring it, to a panel doctor who is at a loss to know whether he is treating an insured or uninsured patient. There is also the difficulty of the panel doctor who happens to have spent time and money on acquiring special skill in a particular branch of his profession. If the patient is to be free to change his doctor at shorter intervals than at present, this special knowledge may be tapped to the detriment of its possessor by the insured person going on the panel of an eye specialist one week and on the panel of a throat specialist the next. In a large town like Norwich, with more or less whole-time specialists not on the panel, and with few specialists on the panel, this point is of little significance; but it is not so in a small town like Lowestoft. A system of National Insurance which does not give adequate encouragement to panel doctors, as such, to specialise is surely imperfect. There is also the knotty problem of mileage, and a town like Cromer, with a large country district to serve, feels strongly on this point.

To return to the Minister of Health's alternatives, (*a*) and (*b*), your Commissioner did not hear one word in praise of the latter. The general attitude of panel doctors in East Anglia towards these alternatives might be summed up in the saying that: "The devil you know is better than the devil you don't know." This unknown, or at least uncertain, alternative would seem to have been put forward to add much needed charm to the first alternative by sheer force of contrast. The first alternative may not be palatable, but just look at the other! Taste it! Having done so, you find your palate so blunted that the unpleasant taste of the first alternative is hardly noticed. Emphatic endorsement was voiced with regard to the point raised in this connexion by Dr. Cox—that it is not usual to suggest that a party to a dispute should accept a reduction in remuneration pending the report of an inquiry.

It is not as premature as it may seem at first sight to touch on the future, five years hence. A doctor with a 2000 panel put the matter like this: "We have gone into the whole question carefully, and with our eyes open have deliberately sent in our resignations. We may, perhaps, on the advice of our leaders accept a reduction, and do our best to carry on for the next five years. But a further reduction at the end of this period will mean that breaking point has been reached."

It would not be fair to end these notes without a reference to the appreciative comments made as to the conduct of negotiations at headquarters. The representatives of the panel doctors enjoy the reasoned confidence of practically every doctor who touched on this subject with your Commissioner, and the leaders may be assured of appreciative loyalty from the rank and file in this area.

THE MOTOR EXHIBITION AT OLYMPIA.

(BY OUR MEDICAL MOTORING CORRESPONDENT.)

THE outstanding feature of this year's exhibition at Olympia is the marked decrease in prices for all exhibits, coupled with increased value for money; prices, in fact, are almost on a lower level than before the war. The manufacturers have achieved this result through concentrating on the reduction of expenses, rather than on the production of a large number of different models. The present prices are based on an expected larger output. I believe many makers are adopting extreme measures to retain a footing in the trade and to meet foreign competition. At all events, the public is the gainer, so it is to be hoped that prospective car owners in return will encourage home industries by purchasing the products of British factories.

Six-brake Cars and Cushion Tyres.

Since putting forward my views last week[1] I have had the opportunity of examining most of the exhibits in detail, and my impression is that revolutionary innovations find no place in this year's display. In fact, as predicted, the only exceptional points are front wheel brakes and cushion low pressure tyres. The Rolls Royce Company are now fitting the former to their cars, and are doing so in addition to the ordinary four brakes. A specimen of the "six-brake" car is not shown, but all cars bought after a certain date will have the extra brakes fitted free of charge. The Talbot Darracq, Sunbeam, and Unic among others fit them now as a standard feature. The Talbot Darracq is exceptional in that it is almost the only car the price of which has not been reduced. It is now supplied with magneto ignition and priced at £495.

I have nothing to add to my remarks of last week regarding front wheel brakes and the new tyres; a further view has confirmed my list of cars that should be inspected. In addition to those previously named,

[1] THE LANCET, Nov. 3rd, p. 998.

the Hillman at £350, the 9 h.p. Hampton at £275, the new Unic, with a specially designed "body" for the doctor, and sold by Messrs. Mann and Overton of 10, Lower Grosvenor-place, should be considered. Among the lighter models the Bayliss Thomas Coupé, listed at 300 guineas, is worthy of note. Of the cars enumerated last week, the 12 h.p. Austin has been reduced in price to £375, and the 11 h.p. Standard now costs £230. The 12 h.p. Sunbeam is turned out for the reduced sum of £570, and is excellent value for this money. In fact, at the above figures, all the cars mentioned are, in their respective spheres, tempting investments. I might even go further and suggest that whichever make is chosen the purchaser will not meet with disappointment, if he takes due care of his property.

Catering for the Owner-driver.

In considering the care of the car I might mention that those who are not keen on undertaking a periodical overhaul themselves could with advantage consult the Light Car Maintenance Co., of 3A, Elm-road, Camden Town, who specialise in that class of work. A good many manufacturers provide a similar service, either at their own factory or through their agents. Those considering the purchase of a car out of income may be interested in some of the schemes proposed by Messrs. Offord, the coachbuilders, of Gloucester-road, Kensington. This firm also specialises in body work for the profession. Intending purchasers are certainly faced with an excellent choice of coachwork. The cult of the all-weather car has many followers, and the latest models include the added comfort of side curtains which open with the doors, and are not merely buttoned on. Adjustable front seats and pedals are another improvement bound to be appreciated by those who sit at the steering-wheel. Messrs. Barker and Co., Windover, Ltd., and Hooper and Co., among others, show carriage work which in design and colour is a delight. Those favouring the saloon body may be interested in the specimens shown on the Humber stand.

Many visitors were attracted to the galleries, and especially to the section given over to the tyre manufacturers. Messrs. Dunlop and Michelin both have produced tyres of larger cross-section, which thus holding an increased volume of air at a correspondingly reduced pressure, give a marked increase in cushioning capacity. They are not easy to fit on old cars, as they usually (on account of size) need additional clearances. Where desired, this is being arranged for on new cars. Messrs. Michelin fit these tyres on the ordinary beaded rim; Messrs. Dunlop use inextensible wired edges, and a special type of rim to retain the tyre in position.

Tyre Trouble Eliminated.

Among puncture proof devices, the Adey seems likely to give satisfaction. It is an inner tube, much thicker than the ordinary type, and it has in addition a light internal coating of a special rubber compound, which seals any puncture. Another solution is offered by the Jeff tube, the inside of which contains many rubber flaps; if a nail pierces the tube it pushes one of the flaps aside. When the nail is withdrawn, the pressure of air forces the flap back into position, and so closes any hole. At Messrs. Harvey Frost's stand many vulcanisers were on view. They certainly help to preserve the life of a tyre, especially the covers. A cut filled in and vulcanised may extend the existence of that cover for many months; ordinary stopping may, of course, stay in, but as a rule it does not. A properly vulcanised repair is much better. Until the advent of the self-starter we were all slaves to the crank handle, now such labour is of the past, but tyre inflation requires almost as much energy. This can be avoided by an engine-operated pump inflator, which is connected up to the engine, taking the place of one of the sparking plugs. The engine is run, and in about four minutes the tyre is fully inflated, an indicator showing when the correct pressure is reached. Another boon is the spare wheel, or, what is even better, the Warland dual rim. The undoing of a few nuts permits the flange to be lifted off, and a rim carrying an inflated tyre to be substituted. A simple ratchet is employed to expand the rim, and thus allow a gap piece to fall out, and the tyre is then easily removed.

Comfort and Efficiency.

Further exploration of the galleries revealed many other interesting novelties both for luxury and utility. I have at times had artillery wheels which became loose, so if possible I usually now advise Sankey wheels, which for tightness and power of resistance are eminently satisfactory. At the Zenith stand there were sectional examples of the working and adjustment of what is undoubtedly an ideal gas producer. In some cases, where two or more people drive the same car, it is often found that the controls are out of reach for one of them, and cushions must be used to obtain a comfortable position. To obviate this, Messrs. Mann Egerton have introduced a pedal extension, which can be put on or detached in a moment. They also show an ingenious car heater, in which the temperature is obtained by filtered warm air pre-heated by radiation. The danger of dazzling headlights has produced an enormous number of anti-glare devices. The best solution offered seems to be a contrivance, manufactured by Messrs. Brown Bros., Ltd., which causes the headlights to dip at the driver's will. Windshield cleaners are also shown in numerous patterns. I believe mechanical cleaners are better than the preparations for treating the screen, in overcoming the nuisance of fogged glass. Some of the contrivances are worked off the engine, others by electricity. A most efficacious one is the Dekla, operated by hand only. This firm has also a girderscope driving mirror which can be easily clipped to the pillar of the windscreen, and gives a very wide rear view. Among rear screens the Auster and Beatonson provides full protection and comfortable travel under all weather conditions. Many firms specialised in lubrication, and were keen to discuss both that subject and their oils. There can be no question, if one wishes to obtain not only the greatest efficiency from an engine, but also the maximum life from the working parts with a reduction in wear and tear, lubrication of the working parts is the most important consideration. Well-known brands of oils, such as the Shell-Mex, the Vacuum Oil Co., and the Newton Motor Oil can be relied on. Cheaper oils sold in bulk may prove much dearer in the long run. It is a true saying that a motor engine may pay more in friction tax than in any other direction.

Insurance against Loss and Damage.

The prudent motorist is, of course, well advised to see that he is fully insured against all risks, and at the White Cross, Car and General, Premier Motor Policies all information on this important subject could be obtained. Insurance to secure payment for hire of a vehicle during repair of insured one, as well as against theft of professional apparatus left in the car, seems worthy of consideration; also the previous fixing of replacement value of car in the case of complete destruction or loss.

Now that the winter is approaching the radiator muff shown by Messrs. Brown Bros. supplies a useful want, as does also an arrangement to maintain the temperature of the garage and thus avoid running the water off every cold evening. A Norton motor stove or a safety-lamp answers admirably. The Lodge priming plug, which permits of the easy introduction of petrol or ether into the engine greatly facilitates starting in cold weather. Among other good plugs shown are the K. L. G., Hobson, and Champion. Foot-warmers, an instarter device, various jacks, Parsons's non-skid chains, tyre-pressure gauges, automatic traffic warners, as well as clocks, watches, mascots, horns, car locks, &c., offered strong temptations to the buyer of moderate means.

THE WORK OF THE LEAGUE OF REMEMBRANCE (1914–1919).

HOSPITAL SUPPLIES ON A VOLUNTARY BASIS.

THE anniversary of Armistice Day is an appropriate time for calling attention to the activities of the League of Remembrance. The work of the voluntary associations in providing for the needs of the sick and wounded during the war has been freely recognised; it is not so generally known that such work is still being carried on in aid of civilian hospitals, welfare centres, and similar organisations, by the League of Remembrance at 1, Marlborough Gate, London, W. 2.

The League, which is the direct descendant of the Cavendish-square depôt and the Mulberry-walk Surgical Requisites Association, was founded to be a living memorial to those who fell in the war, and to perpetuate the spirit of service which united the nation during the time of supreme trial. During the war the sense of obligation to the community grew and was organised, and a great deal of fluid energy and goodwill received the training and discipline necessary to harness it to the public weal.

Before the close of hostilities it had become evident to far-sighted observers that, if a means could be found to employ in the service of peace the energies so freely offered in war, it would be to the permanent good of the community. A movement was inaugurated at Cavendish-square, largely at the instigation of the late Duchess of Albany, to carry on the work of hospital supply. A scheme was prepared under the practical direction of Mrs. E. H. Gibson, C.B.E., the head of the Cavendish-square depôt, and sanction was obtained from the Charity Commissioners to apply the funds in hand to the initial outlay. The scheme was further laid before the heads of the Mulberry-walk Association and, animated by a like desire to find some means of establishing a memorial of perpetual service, they added their surplus funds to the capital available for establishing the League. A house was taken, suitably equipped, and opened by Princess Beatrice, President of the League, on June 28th, 1920, and under her patronage and guidance the work of making hospital equipment has gone steadily forward.

Requests from hospitals, welfare centres, and public nurseries, totalling 571, have been answered, with the result that some 11,500 garments, from shrouds to surgeons' coats and baby clothes, have been made. Over 370,000 surgical dressings have been prepared, and, as the facilities offered and as the work done becomes better known, the demand constantly increases. The procedure is simple. A hospital sends to the League headquarters such materials as it wishes to have made up, with a pattern; the League undertakes to do the work, and to deliver it within two months entirely free of charge. Incidentally, the pattern is the hospital's affair; the League takes no responsibility for that. As to the quality of the work the League has a high standard of excellence that is rigorously maintained. At the head of each workroom is a salaried "sister" (always the widow or dependent of an officer fallen in the war) who is responsible for the work done, and who must inspect and pass every garment made in her room by the voluntary workers before it is sent out.

The supply of surgical dressings, in which the League takes particular pride, has a definite reaction upon nursing, in that in many cases it relieves nurses from the somewhat arduous task of "replenishing stock" at the end of the day. As long as it does not interfere with the curriculum of training, the assistance that the League gives to the nursing profession is most valuable. To cope with the ever-increasing volume of work the League requires a great many voluntary workers, and in consequence, the importance of social hygiene, the needs of hospitals, and the work of welfare centres is constantly brought to the notice of a large number of women, who thereupon become propagandists and missionaries in the cause of public health. In this connexion a library has been founded and is shortly to be enlarged, in which official publications, such as reports of the Ministry of Health and authoritative bodies dealing with nursing, child welfare, preventive hygiene, &c., will be available, and may be expected to prove of great educational value.

The League workers, moreover, accustomed to the prompt and careful execution of orders, form a body whose services in the event of emergency, such as an epidemic, would be immediately available. During the recent small-pox outbreak application was made to the League for vaccination pads, which were at once supplied. In a graver emergency a like promptitude would be of the utmost service. In order that the work of the League may be kept on sound and up-to-date lines an advisory committee of medical men periodically review and criticise the progress of the work.

The personnel of this medical advisory board includes: Sir Frank Colyer, Sir Alfred Fripp, Sir Robert Hill, Sir Robert Jones, Sir Alfred Keogh, Sir William Arbuthnot Lane, Mr. John Murray, Mr. Leslie Paton, Sir James Purves-Stewart, Sir Alfred J. Rice-Oxley, Sir Hugh Rigby, Mr. C. Knox Shaw, Mr. H. J. F. Simson, Sir Joseph Skevington, Sir Arthur Sloggett, Mr. Herbert Smale, Mr. R. C. Jocelyn Swan, Dr. H. Campbell Thomson, Dr. Kate Marion Vaughan.

The Committee of the League welcomes suggestions that may increase its usefulness. It has on occasions placed its rooms at the disposal of organisations wishing to hold meetings on subjects connected with the national health and well-being. The present premises barely suffice for the work undertaken, and a scheme is in preparation for the endowment of a permanent establishment devoted to the making of hospital requisites on a still larger scale. It is proposed to raise a sum of £30,000 for the endowment and permanent establishment of the League, and for this purpose donations are invited.

A NEW X RAY DEPARTMENT AT WEYMOUTH HOSPITAL.

ON Nov. 3rd, at Weymouth, a new and well-equipped building, erected to the memory of the late Dr. James Miller, for many years on the staff of the hospital, was opened by Sir Humphry Rolleston, supported by Dr. A. E. Barclay, of Manchester. Mr. Clark, chairman of the hospital, presided at the opening ceremony, and referred briefly to the recent improvements which had been carried out in the hospital building. The new wing was then formally opened by Sir Humphry Rolleston, the text of whose speech is given on p. 1065 of this issue of THE LANCET.

Dr. Rodier Heath, the medical officer in charge of the X ray department, briefly outlined the progress of X ray work in the town, and said that when he first came there there was only a small 10-inch coil and an old dipper interrupter, but the work had grown, and it was found that a larger and more modern installation had become a necessity if this important and ever-growing branch of medicine was to be carried out in a proper manner. Unfortunately the present-day financial straits had made it very difficult to secure the necessary funds, but through the generosity of the late Dr. Miller's mother, and to friends, together with some £3200 raised by fêtes ably organised by Mrs. Sanderson-Wells, it had been found possible to build and equip the department, which he had no hesitation in saying was such as would enable him to carry out all kinds of X ray work thoroughly and efficiently. Dr. Heath then thanked Sir Humphry Rolleston and Dr. Barclay for the stimulus they had given to the work of the department. To Dr. Barclay, in particular, he owed a debt of gratitude. For many years Dr. Barclay had

shown him great kindness in allowing him to study the methods of the X ray department at the Royal Infirmary, Manchester.

Dr. Barclay, in reply, congratulated Dr. Heath on the new installation. He then gave a brief outline of progress as exemplified by his own department at the Royal Infirmary, Manchester, where he had been working since 1908, at which time he only had one small room and a dark room in which all the work was carried out. Development had gradually taken place, and the work had increased by rapid strides, until the department had become what it was now with its many sections and nine sets of apparatus, including two for intensive treatment. He went on to say that he was convinced that great progress had already been made with this treatment, and that it was not too much to hope that by its means many forms of cancer could be cured, and also light thrown on the causation of this disease. He quoted one case in particular of which he had skiagrams showing a pelvis, riddled with sarcoma, and the condition now showed that the diseased bones had been entirely replaced by healthy tissue, and instanced many other cases where irradiation was of proved value. Work of this kind required a very high degree of skill, and should only be in the hands of experts.

In seconding a vote of thanks to the speakers, Dr. James Macpherson Lawrie referred in touching terms to his late colleague, Dr. Miller.

The department includes a large radiographic and screening room, which is lighted by three large windows fitted with wooden roller blinds, a treatment room for therapeutic work, and the usual dark rooms and office. The apparatus consists of a large oil-immersed "Snook" transformer, fitted with auto-control and time switches, which gives an output of 80 milliampères, a rotary converter for heating the Coolidge filament, and a 16-inch coil for therapeutic work. These were supplied by Messrs. Newton and Wright. There is also a screening stand couch, and a special table fitted with a Potter-Bucky diaphragm, and various tube stands and accessories, all of which were supplied by the Cox-Cavendish Electrical Co. The erection of the apparatus and designs were carried out by Mr. T. H. Escott, of Weymouth.

MEDICINE AND THE LAW.

Unjust Censure.

SEVERAL remarkable statements appear in the report of an inquest on the body of a married woman, 35 years of age, who apparently threw herself and her 18-months-old child into the Thames on some date between Oct. 13th, when she disappeared with the child, and Oct. 22nd, when her body was recovered. The dates are important, for it emerged from the evidence that the depression which culminated in suicide dated from a visit to the Battersea General Hospital, where she was told, after an X-ray examination, that she was suffering from tuberculosis of the spine. The date of this examination is not stated, but it must have been prior to Sept. 4th, when the patient attended the Brompton Hospital for confirmation of the report. This confirmation was not forthcoming, for, after further X ray photographs had been taken, the radiologist at this hospital stated that there was no disease in the cervical spine, and this information naturally relieved the patient's mind. Though it was more than five weeks after this second consultation that the woman disappeared, the coroner and the jury took the view that the previous diagnosis was the indirect cause of the suicide, and censured the hospital accordingly for "great indiscretion." Had the original diagnosis of caries of the fifth and sixth cervical vertebræ been established post mortem, which it was not, we presume that no censure would have followed. So long as diagnosis is an incomplete science, often upset by post-mortem evidence, it seems hardly fair to blame a hospital for an error of diagnosis per se. As to the alleged indiscretion, if the hospital authorities had good reason to suppose that the patient was afflicted with cervical caries, surely it would be in her interest to inform her of the fact in order that she might seek appropriate treatment. This brings us to the extraordinary pessimism of the coroner on this point. He is reported to have said "that for a person to be told that she was suffering from tuberculosis of the spine was almost like pronouncing sentence of death." Surely the prognosis of a young adult who undergoes treatment in a modern institution such as the M.A.B. hospital for cases of non-pulmonary tuberculosis for adults at Lowestoft (St. Luke's) is not so bad as this would suggest. This hospital having only been opened in May, 1922, end-results may not be available, but Rollier states definitely of the Leysin clinics that the prognosis of surgical tuberculosis is not less favourable in adults than in children, and F. Langenskiöld has recently reported from Helsingfors good results in 70 per cent. of his cases of cervical spondylitis. The coroner and his jury seem to have been unduly impressed with one side of the tragedy and not to have taken other possibilities into account. For example, it was presumably pain on account of which the patient originally went to hospital, and if this pain, as it turned out, was not of organic origin nothing is more likely than that the patient was of unstable mentality. The difficulties of medical treatment are likely to increase if an opinion based on careful investigation and X ray photograph is liable to be held responsible for an impulsive action committed weeks after the patient's mind had been set at rest by a subsequent reassurance.

Poor Persons, the Law, and Medicine.

The President of the Divorce Court recently called attention to the fact that a well-known K.C. and an equally well-known member of the junior bar were appearing before him without fees on behalf of a petitioner who was a charwoman, and who was assisted by a firm of solicitors who equally acted for her as for a "poor litigant." "These facts deserve to be known," said Sir Henry Duke. "The subject has been publicly discussed lately, and there is at the present time much doubt whether the existing arrangements for facilitating the settlement of matters of this kind for poor persons could be carried on." The medical profession, to whom gratuitous assistance for the poor is no new thing, are of course aware that a movement for giving legal help to the poor in the civil (not in the criminal) courts was started by the legal profession some years ago. It has never, however, as far as we are aware, become in any way general, so far as lawyers are concerned. In the medical profession men of the greatest eminence, as well as those in the ranks of general practice, are constantly aiding their humble neighbours, and are sometimes held up to obloquy for endeavouring to obtain even a modified fee for so doing. A medical witness who refuses to give evidence on behalf of a patient until he is paid for doing so is denounced as greedy, when the lawyers on the same side are not treating the patient as a "poor litigant," but are paid for their work. If barristers and solicitors wish to institute a system through which the poor may profit by their services, they should organise it on a wide basis. The fact that two eminent barristers have appeared together in a case, in which, probably, far less distinguished counsel would have produced the same result, is but a small step in that direction.

Tests of Intoxication.

At the Central Criminal Court a man named Wilmer, 35 years of age, was tried upon an indictment charging him with causing bodily harm to two women when in charge of a motor-car by "wanton driving or other wilful misconduct," and was acquitted. The accident had occurred in a crowded part of the city in the afternoon, and the defendant, after being taken to a police station, was medically examined by Dr. R. T. Edwards, who deposed that his face was flushed, his speech was

slightly slurred, the pupils of his eyes were dilated, and that his breath smelt very strongly of beer; he could walk about the room, but when "toeing the line" staggered for the first yard. The Romberg test was applied, and the defendant swayed more than would be expected in a sober man. Dr. Edwards, in cross-examination, declined to admit that the symptoms shown were those of a man suffering from shell shock and neurasthenia.

Sir W. H. Willcox, called for the defence, had examined the defendant in consultation with his usual medical adviser, and had come to the conclusion that he suffered from shell shock and neurasthenia. He added, in reply to questions, that he did not regard many of the tests applied at the police station as tests for drunkenness. They were tests for nervous disease. The dilatation of the pupils, he said, was only important in extreme cases of alcoholism. It was a common mistake at hospitals to regard the smell of alcohol as proof of drunkenness. The "toeing of the line" test appeared to have resulted in the defendant's favour, and the Romberg test he regarded as for locomotor ataxia and of no value in cases of alleged drunkenness. It may be added that the defendant declared in the witness-box that he had asked at the police station for another medical man to be sent for and that this had not been done, that he had claimed there to be sober and protested against his treatment, and that he had only drunk that day a pint of draught beer in the course of a bread-and-cheese luncheon. He had, however, had very little experience of driving a motor-car. He had been out two or three times with an instructor and had apparently held a licence for driving a motor-cycle in 1909.

In comment it may be observed that the tests applied for drunkenness at police stations are very frequently attacked in police courts in doubtful cases, and that, if possible, tests should be devised of generally admitted value and not likely to be questioned and discredited. It need hardly be added that apart from any question of shell shock or neurasthenia, the more crowded parts of London are not suited for drivers whose experience is limited to three or four trips with an instructor. Mr. Wilmer was, no doubt, perfectly sober but, apart from his case, it is to be remembered by all drivers that an amount of alcohol less than that which would cause "drunkenness" in the popular sense may impair any man's judgment in a moment of emergency in a crowded street, and contribute to a serious accident.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh: The Care of the Convalescent, a New Departure.

THE opening of the first unit of the new Astley-Ainslie Institution on Oct. 20th by Lady Susan Gilmour marks a new departure in the conception of convalescence. Mr. David Ainslie, of Costerton, Midlothian, who died in 1900, left the residue of his very considerable estate for the purpose of founding an institution to be known as the Astley-Ainslie Institution, for the benefit of convalescent patients from the Royal Infirmary of Edinburgh. He directed that the funds should accumulate for 15 years for this purpose. The specified time elapsed in 1916, but, owing to war conditions, nothing in the nature of building could be done at that time, and the funds have been allowed still further to accumulate, so that the governors of the institution have now at their disposal about £600,000. Four houses have been acquired in the Grange Loan district with some 25 acres of ground, and these, when fitted out, will provide some 150–200 beds. The present unit has 34 beds. There is a resident medical officer and a trained staff. This institution is the first of its kind in this country or even in America. The existing convalescent home at Corstorphine is intended only for walking cases—for those, as it were, well on the road to complete recovery. Hitherto medical men have confined their attention chiefly to disease in its more or less acute stages and to a lesser extent to its prevention, whilst the gradual return to complete and normal health has been allowed to take place with little or no medical supervision. In a circular sent round to all the wards in the Royal Infirmary the aim and intention of the governors is stated thus:—

> The governors have decided to receive patients whose period of convalescence is likely to be prolonged, and/or who require continued institutional treatment and supervision, whereby recovery will be definitely hastened. . . . The governors are desirous that the opportunities afforded by the institution for the scientific study of the process of convalescence from different diseases should be systematically utilised, and they would welcome the coöperation of the members of the staff of the Royal Infirmary in suggesting and directing lines of investigation towards this end. It is hoped that the scientific study of the processes underlying recovery of health after illness may lead to improvement in the methods employed in the treatment of the convalescent stage.

Briefly, then, the importance is recognised of more adequate medical attention in convalescence and more scientific study of its processes. To the attainment of this desirable end the Astley-Ainslie Institution is dedicated, and Edinburgh is proud to be the first adventurer in this important field of medical work and knowledge. None can fail to see the great possibilities of the scheme for the improvement of the nation's health and efficiency. The more rapid recovery from disease and disablement, involving a smaller loss of working capacity, is of immense economic importance to the country, as is also the more complete recovery which should prevent much further disease and debility. More accurate and thorough study of convalescence may be expected to lead to advances in these directions and at the same time, not improbably, to considerable increase in our knowledge of the ætiology of many diseases.

University of Edinburgh: Election of Assessors to the Court.

Sir Norman Walker was elected on Oct. 25th to the University Court in place of Sir George Berry, who has had to retire owing to the pressure of his Parliamentary work. It has long been the custom that two out of the four Assessors to the Court should be medical men, Dr. Mackenzie Johnston being the other at present serving in this capacity. Sir Norman Walker and Dr. Mackenzie Johnston have many distinguished predecessors, amongst whom are numbered Sir Patrick Herron Watson, Sir Joseph Bell, and John Duncan.

University of Glasgow.

Students' Welfare Fund.—The week is marked by great University activity on behalf of the Students' Welfare Fund. Like other non-residential Universities and Colleges, that of Glasgow has, for the greater period of its existence, suffered from the lack of corporate life. Blame must to some extent be laid at the door of the national temperament. Academic honours open up more lucrative fields for their holders; too little attention has been given to the development of culture and character. The experiences of the war have drawn the attention of teachers and students alike to the broader issue; and to no faculty is the question more important than to that of medicine. The scheme includes the provision of hostels, larger unions, and adequate playing-fields, and the sum aimed at for this purpose is £150,000. Of this £70,000 have already been raised. Two hostels have been equipped; a new women's union has been bought and equipped; the playing-fields have been put in order, and plans for a new pavilion are under consideration. On Nov. 8th–10th the University staged a great bazaar, to be opened on successive days by Viscount Novar, the Lord Rector (Lord Birkenhead), and the Principal. The King and Queen accorded their patronage.

General Council.—At the half-yearly meeting the General Council approved a draft ordinance, which provides for the pensioning of principals and professors at the ages of 70 years and 65 years respectively. There was a good deal of discussion over the imposing

of an age-limit. In summing up the matter, the Principal pointed out that young assistants would accept academic posts the more willingly if they knew that such an ordinance offered them greater possibility of promotion.

Glasgow Royal Infirmary: The Lister Ward.

The Council of the Incorporation of Architects in Scotland at their last monthly meeting decided to lodge a petition with the managers of the Royal Infirmary of Glasgow in favour of the retention of the Lister ward in the infirmary, thus supporting the action of the French Academy of Medicine and other continental societies. The appeals which have been presented to the managers, as published in the *Glasgow Herald* of Nov. 3rd, are signed not only by leading Glasgow citizens in every walk of life, but also by many distinguished members of the medical profession in England, America, France, Germany, Switzerland, and Denmark.

A charity matinée in aid of the building fund of the Glasgow Hospital for Diseases of the Ear, Nose, and Throat was given in the Pavilion Theatre this week. The theatre was granted by its directors, and artistes from various music-halls in the city contributed. Of 37 wards in the city, the Blythswood ward, under whose auspices the matinée was held, is the eighth or ninth to contribute to the support of the scheme.

The first meeting of the Glasgow Northern Medical Society was held recently, when Dr. A. Muir Crawford opened a discussion on Diabetes, with Special Reference to Treatment by Insulin. Drs. W. A. Allan, J. Donald, A. J. Hutton, R. Grieve, J. Todd, and Joseph Glaister took part in the discussion.

Out of a total of 390 panel practitioners in Glasgow 368 have resigned.

Aberdeen Medico-Chirurgical Society.

A clinical meeting of the Society was held on Nov. 1st, Dr. Alexander Ogston, the President, in the chair. Dr. W. F. Croll showed: (1) A child of 8 years with her heart on the right side. The electrocardiogram showed that the case was not one of dextrocardia, but the lung condition did not appear sufficient to explain the displacement; (2) a case of aortic stenosis with delayed conductivity and endocarditis lenta. Dr. Anne Mercer Watson and Dr. A. G. Anderson demonstrated two cases showing the late sequelæ of encephalitis lethargica which presented the syndrome of a mid-brain lesion. Dr. H. J. A. Longmore showed a case of acroparæsthesia—a man of 63, complaining of pain, swelling, and stiffness of the hands and lower half of both forearms while at rest; there was no alteration in sensation and the general physical examination was negative except for a persistently high blood pressure; the condition was relieved by active muscular movement. Treatment by vasodilators and other means, including high-frequency, had been without result. Dr. Longmore pointed out that the case was apparently the converse of intermittent claudication, and suggested as the diagnosis acroparæsthesia associated with vascular degeneration. Prof. Ashley Mackintosh read a note on a case of Brown-Séquard's paralysis of traumatic origin.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Victoria Hospital, Belfast.

THE present session opened on Oct. 23rd, when there was a large gathering of students and of the medical and surgical staff. Mr. A. B. Mitchell, the chairman of the staff, presided, and in introducing Mr. Andrew Fullerton congratulated him upon his recent appointment to the Chair of Surgery in the Queen's University, and expressed confidence that he would fully maintain the high traditions of that chair. Prof. Fullerton, after welcoming the students, spoke of the motives which might prompt the choice of medicine as a career in life. Its financial rewards were in most cases on a modest scale. The profession suffered from injurious competition, and its prestige was often lowered by the conflicts of medical opinion. But for those who recognised its possibilities, it offered a career which could fully satisfy ambition. The pursuit of scientific medicine, the discovery of knowledge, the prevention of disease, the relief of suffering—these were its aims, and in the course of the prosecution of such ideals could be obtained the gratitude of fellow men, and just influence in society. Surgery had in recent years occupied a dominant position, but it was now being pressed hard by the bio-chemist, the radiologist, and the clinical pathologist. Medicine was making vast strides. The discovery of insulin had opened a new era in the treatment of diabetes. Radiology had not only thrown light upon many abdominal conditions, but had illuminated the brain, and advanced into the sphere of therapeutics. It gave some hope of the alleviation or cure of some forms of cancer. The treatment of wound shock had advanced far beyond the outlook in pre-war days. These results were the fruit of international coöperation in medical science, and it was the duty of all to recognise the fraternity of medicine. A provincial hospital must be regarded as a unit in a world-wide association. Research was a matter in which the general practitioner should play his part. Edward Jenner in past times and James Mackenzie in recent years had been general practitioners. The student must study and record his cases with industry and care, and regard his clinical notes as something more important than helps to pass his examinations. A hospital would be known by its records. In conclusion, Prof. Fullerton referred to the long and valuable services which Prof. T. Sinclair, who had become consultant surgeon, had rendered to the hospital and the medical school. He also congratulated Prof. W. W. D. Thomson on his recovery of health, and Dr. H. P. Malcolm on his appointment as assistant surgeon. A vote of thanks to Prof. Fullerton for his able address was passed on the motion of Dr. W. Calwell, seconded by Mr. J. A. Craig.

The staff of the hospital held their annual dinner in Thompson's Restaurant on Oct. 23rd. The staff was fully represented, and the following members of the consulting staff were present: Sir Walton Browne, Prof. Sinclair, Prof. J. A. Lindsay, and Dr. T. K. Wheeler. Opportunity was taken to make a presentation, in the form of an oil painting, "Littlehampton Harbour," by B. W. Leader, R.A., to Prof. Sinclair on his retirement from the active staff. Mr. Mitchell, who presided, referred to Prof. Sinclair's long term of office as professor of surgery in the Queen's University and surgeon to the Royal Victoria Hospital. To his influence and example the great developments of surgery in Belfast and the north of Ireland were in large measure due, and his personal character had been a great asset to the profession. Tributes to Prof. Sinclair's work and qualities were rendered by various speakers, and Prof. Sinclair suitably replied.

The Irish Dental Association.

A year ago the Irish branch of the British Dental Association became an independent body under the title of the Irish Dental Association. On Nov. 3rd, at the Shelbourne Hotel, Dublin, the association inaugurated its independent career by a dinner, when about a hundred members and guests were present. The President, Mr. J. Cockburn, was in the chair, and the Governor-General was principal guest. The President and Dental Secretary of the British Dental Association were present as guests to convey the good wishes of the parent body to its offspring. Among the other guests were the Minister for Local Government, the Vice-presidents of the Royal Colleges of Physicians and Surgeons, and the President of University College, Dublin. The Governor-General, in a happy and cordial speech, spoke of the pleasure it had given him at the recent opening of Parliament to anticipate as a measure of public health the dental care of school-children throughout the Free State.

Correspondence.

"Audi alteram partem."

CENTENARY OF THE LANCET.

To the Editor of THE LANCET.

SIR,—Permit me to congratulate you on the Centenary number of the London LANCET. This journal was the handbook of my father during his life time, and my brother and myself have taken it since we have practised medicine. It is one of the most highly valued publications in the library of the Mayo Clinic. We have on the shelves in bound volumes the complete series.

Believe me, very sincerely yours,

Rochester, Minn., Oct. 22nd, 1923. W. J. MAYO.

To the Editor of THE LANCET.

SIR,—Allow me to congratulate you and your colleagues not only on the occasion of your Centenary, but also on the splendid way in which it was commemorated by your Centenary number. It is, of course, a truism—but nevertheless a pleasant one—to repeat that in America, as elsewhere, THE LANCET is esteemed as one of the few great medical journals of the world, and it is correspondingly satisfactory to see it flourishing so vigorously in its youthful old age.

As assistant editor of the *American Journal of Medical Sciences*, which celebrated its Centenary in 1920, may I be permitted to express the wish that THE LANCET may long continue to play its important rôle in interpreting medical thought to the medical profession of the world.

I am, Sir, yours faithfully,

EDWARD B. KRUMBHAAR.

Assoc. Prof. of Pathology, Univ. of Penna.

Philadelphia, Oct. 20th, 1923.

To the Editor of THE LANCET.

SIR,—The Provincial Board of Health, Toronto, possesses an unbroken bound file of THE LANCET since 1861, and it is with great pleasure that I offer you most hearty congratulations upon the contents and general appearance of the Centenary supplement, filled, as it is, with a most interesting story of the progress of medical science of a century. No journal on this continent approaches the journal in the value and reliability of its weekly contents. May the next 100 years be even more successful than the last!

I am, Sir, yours sincerely,

JOHN W. S. MCCULLOUGH,

Oct. 22nd, 1923. Chief Officer of Health.

To the Editor of THE LANCET.

SIR,—May I add my tribute of congratulations upon the completion of the first century of a brilliant record of scientific work by your journal? I am only expressing the opinion of many of those engaged in the pursuit of research in obstetrics and gynæcology who have gained much stimulation and help from THE LANCET. You and your journal have done inestimable service in keeping up our British standard of scientific truth and excellence in medicine.

I am, Sir, yours faithfully,

Nov. 5th, 1923. A. LOUISE MCILROY.

To the Editor of THE LANCET.

SIR,—The editorial committee of the *Bristol Medico-Chirurgical Journal* hope that the editorial staff of THE LANCET will accept their very hearty congratulations upon the completion of that journal's hundredth year, and they trust that THE LANCET may continue in robust health, and may celebrate very many happy returns of its birthday.

I am, Sir, yours faithfully,

ARTHUR L. FLEMMING,

Bristol, Oct. 31st, 1923. Editorial Secretary.

To the Editor of THE LANCET.

SIR,—My heartiest congratulations on the occasion of the Centenary of THE LANCET. I send my greetings to the editors, proprietors, and managing staff of the paper. To them is due the immeasurable reputation that THE LANCET enjoys throughout the world where medical science is revered. THE LANCET is known not only where English is spoken, but wherever there are patients and doctors. Its articles and leaders being translated into all written languages, it is known to almost all medical men. THE LANCET has achieved in the first 100 years such a popularity and such a great responsibility that its name stands as familiar to all cultured men. Scarcely a day passes without a reference to THE LANCET in lay journals. In respect of a new medical discovery many lay journals, before forming a critical judgment, wait until THE LANCET has commented on the matter, knowing the weight, authority, and truthfulness of THE LANCET'S opinion.

I hold many posts, but of none of them am I so proud as of my pleasant connexion with this "great power" in medical journalism, as

YOUR BUDAPEST CORRESPONDENT.

Nagyvarad, Transylvania, Oct. 17th, 1923.

THE ACTION OF ALCOHOL ON MAN.

To the Editor of THE LANCET.

SIR,—Your review of Prof. E. H. Starling's book hardly does justice to its significance. From the evidence given in this book Prof. Starling is "convinced," as he says in the preface, "that in a civilised country such as ours the abolition of all alcoholic beverages from among our midst, even if carried out by universal consent, would be a mistake and contrary to the permanent interest of the race." It is "written from the purely scientific standpoint," and is intended for lay as well as professional reading. In consequence, a good proportion of the author's own chapters is occupied with an exposition of the elementary physiology of the various systems of the body. There is no attempt to survey the literature and there are no references which would guide the curious and critical reader to original sources. This is a pity, for though the publicity agents of "the Trade" will no doubt be content to hammer Pussyfoot with "Prof. Starling says" (and the teetotallers to hit back under the same authority if they can anywhere find a useful brick), there will probably be a certain number who would like to look further into the details, and the bibliography appended to Prof. Raymond Pearl's appendix deals only with a limited part of the subject.

The first 13 chapters (pp. 1–168) deal with the physiological and psychological effects of alcohol, its use as a food, its absorption and metabolism, the results of excess, and so on, and give a very readable account of generally accepted truths; the gist of them is that alcohol is a narcotic acting on the different levels of the brain from above downwards successively as its concentration in the body increases. Dr. Hutchison (pp. 177–182) gives an uncritical statement of the experience of a a physician on alcohol as a medicine in which its virtues in a variety of diseases are extolled and no mention is made of any disadvantages which may be experienced or precautions which should be taken. Sir Frederick Mott (pp. 183–212) takes an interesting survey of the relation of alcohol to mental disorders, pointing out that its ætiological importance in insanity has been a good deal exaggerated owing to the failure to recognise that persons with an inborn psychopathic tendency may become antisocial with quantities of alcohol which would have no effect on normal people. Finally, Prof. Pearl (pp. 213–286), in a contribution of a much higher critical order than the rest of the book, presents a detailed examination of the relation between alcohol and mortality, largely based on new data collected in Baltimore.

Prof. Starling's argument in favour of the moderate use of alcohol—for frankly once he passes beyond the

statement of physiological fact he is arguing a case—is shortly that there is no evidence that it does anyone any harm and that he finds the evening meal is much jollier with it than without. Fortunately, he is clear as to what he means by moderate (p. 174); none on an empty stomach, 12 c.cm. of absolute alcohol or a glass of beer or a wineglass of claret with your lunch, and with your dinner 35 c.cm. or half a bottle of light wine, a pint and a half of ale, three ounces of whisky or a quarter of a bottle of port will not alter a man's powers of comporting himself with propriety; on occasions, indeed, "another little drop wouldn't do you any harm," but the rash man who takes the equivalent of 70 c.cm. is warned that he may be aware of it next morning. This is truly moderation; many a "moderate drinker" would call it abstinence, and few will want to dispute the conclusion that such quantities are in themselves almost or quite physically harmless to the individual who consumes them. Whether they are in fact without some slight effect is really almost impossible to determine. Prof. Starling himself says categorically that the quantities defined may be taken throughout adult life without interfering with bodily health or efficiency and appeals to Pearl's statistics. These show that the expectation of life of the "moderate and occasional drinkers" is probably a little better than that of the "total abstainers," while the "heavy and steady drinkers" have at all ages and in both sexes a far higher mortality. Prof. Starling (p. 157) parodies this into the summary that "any advantage as regards increased expectation of life lies with the moderate and occasional drinkers rather than with the total abstainers," and has apparently overlooked Pearl's explicit statements (p. 243) that while "total abstainers" include only those who have never taken any alcohol at all, "the person who made it a regular habit to take wine or beer with meals, even though the amount so taken was never excessive, was placed in the 'heavy or steady drinkers.'" Starling's moderation is therefore different from Pearl's, and the habits, unexceptionable in genteel circles in this country, defined by him as quite safe on pp. 174–5, would, in the Baltimore schedules, put a man into the most alcoholic category, the high mortality of which is the main fact brought out quite clearly in the figures. The "heavy and steady drinkers" no doubt included also many instances of gross excess, but the average wages earned were about the same in all three categories which suggests that the proportion of what in our English way we should call really heavy drinkers was not very high. The statistics, therefore, neither support nor refute Prof. Starling's proposition. He gives no other evidence in its favour. But it is one which is quite likely correct and is certainly easy to believe.

The second part of the argument is that a moderate amount of alcohol is actually beneficial because it paralyses the highest levels in the brain, anæsthetises a man from his worries, takes off some of his controls and inhibitions, and promotes good fellowship; the day's work is smoothed off by a placid evening and a good night's sleep and all is in better trim for going on again the next day. So impressed is Prof. Starling with the virtues of alcohol at the evening meal that the brilliant statement of them on p. 76 is supplemented by additional commendation in three other passages (pp. 99, 113, 154). In comment I can only say that though the book is, as the preface says, "written from the purely scientific standpoint," I do not believe that these particular observations have been adequately controlled. The day's work over, a clean cloth, flowers on the table, a congenial companion, and a good meal are all mixed up with alcohol into a jumble of variables. It is, in fact, quite common for teetotallers to have the same joyous experience without the alcohol with the same pleasant result, including the dance. As to the necessity of alcohol at the big dinner party, it is at least possible that no quite sane man would put up with such affairs, unless he was partly anæsthetised, any more than a Scotsman will eat a haggis without some raw whisky to cover up the taste. "The dull depression or the forced merriment of a teetotal party"—I assume that this is a correct summary of sufficient experience—are beside the point. They may be dull because there is no alcohol or because the people involved are inherently dull. Teetotallers as a class are apt to be a queer and cranky lot, and no serious student would pretend to measure the effect of moderate drinking by comparing total abstainers with abstemious drinkers as they have existed in this country in the last 20 years. Spontaneous wild drinking and complete abstinence are each associated with a particular make-up of body, soul, and spirit, as Prof. Starling points out himself (p. 158), and he will surely realise that in comparing teetotallers with average men he is trying again to deal with several variables at once. However, even if his argument will not bear any critical examination, it is easy to allow that Prof. Starling represents a common experience; dinner is pleasanter with alcohol than without.

The moderate use of alcohol is therefore beneficial. From which the author proceeds to the conclusion that national abstinence by common consent would be a mistake. A great many people would agree with him in believing that life would be a more meagre experience without alcohol, and their opinion, like his, would in most cases be founded on wholly inadequate data. Many of them would realise with him that the excessive use of alcohol "is the cause of a large amount of disease, crime, misery, and inefficiency," and that to a use which in common judgment is by no means immoderate is due a mass of stupidity, indecency, and unkindness which the world could well do without. And when they come to strike a balance of the pros and cons, some of them are content to lose their alcohol for the sake of the weaker brethren. Prof. Starling is not; he is not even content to let everyone give it up by universal consent. As befits a great university teacher, he believes that alcoholism is to be cured by improvements in education and social conditions. And meanwhile, under the influence of precisely graduated doses, young men will continue to unburden their souls at the dinners of the Physiological Society, and old men will rashly promise donations to hospitals, and the teetotallers will sit in their dull depression.

The book is unworthy of its author. With the exception of Prof. Pearl's contribution, it contains nothing new, and the general state of physiological knowledge of the effects of alcohol on man was at least as fully, if less vivaciously, stated in the 1918 report of the Liquor Control Board, which could, I think, be had for 1*s.* instead of 12*s.* 6*d.* The reasoning is slipshod and the final conclusions, drawn from "the purely scientific standpoint," have no more "scientific" validity than the impressions of the man in the street; they would be equally "unscientific" if they were the reverse of what they are, and it would be equally a pretence to dress them up as the necessary deductions from precise physiological knowledge. Prof. Starling's verdict may or may not be correct; my point is that if it is, it has been arrived at by intuition or prejudice or some other accessory to practical life; it is not the result of any evidence which he sets out.

I am, Sir, yours faithfully,

Nov. 5th, 1923. A. E. BOYCOTT.

CHLORATE OF POTASH IN ENURESIS.

To the Editor of THE LANCET.

SIR,—In the valuable article, No. XXXV. in your series on Modern Technique in Treatment (Sept. 8th), by Dr. Hugh Thursfield, the writer says he cannot tell why chlorate of potash should be useful in enuresis. Some 20 years ago I saw in the "Year Book of Pharmacy" that a large percentage of chlorate of potash passed unchanged into the urine. I have consequently always been alert to recognise that we affect the mucosa of the urinary

tract when we exhibit chlorate of potash by mouth. Again, the fact has been ever present to me on applying the indican test to a sample of urine, lest by potassium chlorate in excess it should fog the indican test, giving a negative reaction instead of a positive one.

I am, Sir, yours faithfully,

J. BARKER SMITH, L.R.C.P.

Herne Hill, S.E., Nov. 1st, 1923.

THE RESULTS OF MAMMARY CANCER OPERATIONS: A COMBINED INQUIRY.

To the Editor of THE LANCET.

SIR,—The Medical Society of London have appointed a committee of surgeons to investigate the later results of operations for cancer of the breast. The scope of the inquiry at present is being limited to cases of patients who are known to be alive not less than ten years after the primary operation for undoubted cancer. A preliminary inquiry has already brought to light the existence of a number of such cases, and the Society is therefore encouraged to make a wider appeal. The committee would be obliged if any medical practitioner, who has not already been approached, having personal knowledge of any such cases would communicate with the hon. secretaries of the Society.

We are, Sir, yours faithfully,

T. P. LEGG,
F. LANGMEAD,
Hon. Secretaries, Medical Society of London.

11, Chandos-street, Cavendish-square, W.,
Nov. 1st, 1923.

THE ALBUMINURIA OF PREGNANCY.

To the Editor of THE LANCET.

SIR,—I did not know before reading Prof. F. Cook's letter in your issue of to-day that at times the albuminuria of pregnancy may be of uni-renal origin. He mentions one case in which "urine from the left kidney was loaded with albumin," whilst "that from the right contained the merest trace." The idea is quite new to me; the occurrence, presumably, must be attributed to structural peculiarities, such as Dr. J. W. Russell (in your issue of Oct. 27th) adduced in explanation of his cases of unilateral œdema affecting the lower extremities. In pregnancy, with the rise of the intra-abdominal pressure, such factor for the first time must have come into prominence, otherwise the albuminuria must be imputed to have existed before. It is interesting, however, to observe that so far in his observations, the albuminuria of pregnancy is more usually bi-lateral, "although in several instances . . . very considerably more albumin" has been found coming from the left than the right kidney. From this it is plain that if the course of the left renal vein (from the renal hilum, across the spine in front of the aorta to the cava), and its disposition (at right angles) associated with the lordosis—natural in advanced pregnancy—is the cause of the greater leakage of the left kidney, since on the right side such factors are absent and yet albumin in the right renal urine occurs, such disposition cannot be the only or the pre-eminent factor in the albuminuria of pregnancy.

It was supposed by those who did me the honour of discussing my paper on Eclampsia and Its Incidence at the Royal Society of Medicine (1921)[1] that in advancing a mechanical explanation of eclampsia, I was simply reverting to Lever's idea (1843). Lever supposed that puerperal convulsions occur because the kidneys become inefficient from obstruction of their veins. My idea is quite different: it is that the blood-flow through the renal *capillaries* is obstructed and ultimately stopped by the physical changes which occur in some cases of pregnancy. I came to this opinion from my study of the levator ani muscles. I saw that these muscles act simply as a pressure-resisting mechanism, and that the pressure they help to sustain is essential to normal metabolism. In man, with a persistent diminution of this pressure, we get a diminished metabolic rate with resulting weakness—physical and mental (neurasthenia)—whilst with its too great increase, as occurs at times in pregnancy, the excretory organs (liver and kidneys) are prevented from functioning efficiently by circulatory obstructions. These, in my opinion, explain eclampsia; the fact that in the albuminuria of pregnancy no "definite deviation whatever from the normal, with the possible exception of œdema" occurs, does not vitiate this explanation; it supports it. The occurrence of such albuminuria without any sign, "clinical" or "biochemical," of deviation from the normal is in line with my conception; it is just what we should expect. But no one can believe that with albuminuria the kidneys are normal, even though a return to normal should subsequently occur. With treatment the albuminuria of pregnancy passes away, without it the change in the kidney and liver not uncommonly proceeds to that disorder of which a blood change is the natural result, and convulsions the only expected ultimatum.

The publication of Prof. Cook's inquiry, when completed, will be looked forward to with expectation. Whilst thanking him for referring to his work at this early stage, I venture to warn him of the danger of imputing the albuminuria of pregnancy to mechanical causes; such can only lead to the belief that eclampsia itself is similarly caused.

I am, Sir, yours faithfully,

R. H. PARAMORE, F.R.C.S. Eng.

Brook-street, W., Nov. 3rd, 1923.

[1] THE LANCET, December, 1921.

THE LISTER WARD IN GLASGOW ROYAL INFIRMARY.

To the Editor of THE LANCET.

SIR,—The inherent courtesy of Dr. Freeland Fergus's letter to THE LANCET of Oct. 27th almost disarms criticism. None the less, may I venture to think that the real issue is, after all, the ever-recurring old-time issue, what to destroy and what to conserve—the claims of the past and the needs of the present. These, indeed, frequently conflict, but when there exists the desire there is sometimes found also a middle way wherein very often these issues may be reconciled. In this instance, on the one hand, there dominates the unique and immeasurable value of the famous ward; and pertinently thereto, may I quote part of a letter of Oct. 13th from Colonel Washburn, director of the Massachusetts General Hospital, U.S.A. Writing of the old operating room of his hospital where, on Oct. 16th, 1846, ether was first given to full surgical anæsthesia, Colonel Washburn says: "This room is kept as a surgical shrine, which is of great interest and value to the medical profession of America, and we hope to the medical profession of all the world." Of how much relatively greater value is the Lister ward? Sir Thomas Oliver, of Newcastle-upon-Tyne, who has just returned from visiting the hospital named, told me that a memorial lecture is delivered in the theatre once in each year. Dr. Albert J. Ochsner, writing by the same mail from Chicago in favour of preservation, concludes his letter: "I believe that the sentiments expressed represent the feeling of the surgical profession the world over, and I sincerely hope that your argument may have the result of retaining the Lister ward." When Admiral Sturdee was lately in Glasgow, seeking funds for the preservation of Nelson's old ship, the *Victory*, he uttered words apposite also to the Lister ward: "It's value for recruiting purposes, for encouraging the sea instincts of the race, and as an inspiration for the future as well as a memorial of the past, is beyond all reckoning."

On the other hand, it is, of course, at once and readily admitted that the real infirmary requirements of to-day hold their own important and essentially necessary place. What, however, these requirements are, and the manner in which it is proposed to meet them, are known only to the infirmary managers and staff; but

I may venture the opinion after almost 50 years' experience of planning, that given goodwill and the desire to meet the various needs and interests, I have never once seen a planning problem that could not be solved. A new and even great dispensary will, within measurable time, become obsolete and require replacement, but the Lister ward properly envisaged will become of increasingly greater value as the years come and pass away. It may have been, and I believe was, the original intention of the managers to remove the ward and leave the site open; but to build upon the site as is now proposed must be an afterthought, for the original elevations do not show any such purpose or intention. Why, then, this sudden change? The Lister ward occupies the very narrowest angle of the ground proposed to be utilised for the new dispensary, and, therefore, might surely and not unreasonably be spared. To build upon this small portion of ground is to go back also upon the managers' own original argument against the retention of the one-storey Lister ward—viz., "that it would to some extent interfere with the free circulation of light and air to the new buildings." If, therefore, not one but two-storey buildings are proposed to be erected upon the site of the ward, surely the evil alleged will only be intensified; and it may respectfully be asked, Do the new buildings proposed solve the managers' difficulties in the best, or, indeed, in the only possible way? Lord Rosebery once aptly summed up the matter in a somewhat analogous case when he affirmed, "What is wanted is not an engineer to condemn, but an engineer to preserve."

May it not be that the managers are somewhat obsessed with the idea "of a new and thoroughly up-to-date dispensary for the out-of-door patients," to which all other things must be sacrificed? Monuments of "historic interest" may not directly help towards the "alleviation of sickness and distress"; but they go a very long way, alike in being and inspiration, to the encouragement of others in the benign service of humanity, whether that service is rendered by individuals or by the staffs of great institutions. These monuments remain sermons in stone and ringing trumpet calls, animating to great deeds, long after the human voice of the preacher or leader has passed away. In surgery, are such buildings not the battle emblems of the great army of healers, impelling to emulation in sacrifice and heroism; in arduous, always beneficent, and often dangerous work? Wherever, in the many places in which Lord Lister carried on his researches, even from student days in University College, London, it yet remains that the Lister ward is the one and only place in which these researches actually and first touched suffering humanity. It was in the very ward which it is to-day hoped to preserve that the hopelessness, the despair, and the agony, not only of the patients in the ward, but of suffering humanity throughout the wide world first saw the morning dawn of hope, relief, and life.

With all deference, and sincere deference, to Dr. Freeland Fergus's position and views, is he not in his loyalty to his colleagues valiantly reasoning to try by just a little to make the worse appear the better cause—hence, his many and obvious perplexities? In his heart I think he agrees with me, that the real question is not the erection of a great dispensary, but whether the Lister ward is to be regarded as at best but a pertinent of the Glasgow Royal Infirmary or as a great national and world memorial and heritage.

I am, Sir, yours faithfully,

Ayr, Oct. 31st, 1923. JAMES A. MORRIS.

THE WORK OF THE TUBERCULIN DISPENSARY LEAGUE.

To the Editor of THE LANCET.

SIR,—There are several passages in the introductory remarks to the report on the work of the Tuberculin Dispensary League in THE LANCET of Nov. 3rd (p. 984) to which I might fairly take exception; but I am sure that everyone knows that in a highly controversial subject the knocks one gives and takes are not the real thing that matters, and should not be allowed to obscure it.

May I hope that our pamphlet may be now read as a commentary on the report rather than as an attack upon it, and that all who are interested in the check of tuberculosis will read both together, and form their own conclusions as to the efficacy of Dr. Camac Wilkinson's method. Particularly I would refer them to Dr. Stobie's figures, printed as an appendix, which are altogether outside the controversy. I am quite willing to reprint it with any reasonable modifications desired.

I am, Sir, yours faithfully,

RANDALL DAVIES.

Cheyne-gardens, S.W., Nov. 5th, 1923.

VICTOR HORSLEY LECTURE: THE LATE PROF. JOHN MARSHALL, F.R.S.

To the Editor of THE LANCET.

SIR,—I am sorry my old friend, Sir John Tweedy, should think that my remarks about Marshall were cruel and intended to disparage him. My intention was simply to compare him and Lister, and I could not help making the comparison into a contrast, or pointing out what a serious mistake was made by the Council of University College in preferring his claims to those of Lister. That Marshall was a good surgeon of the old school, that he was of the highest character, and had a charming and gentle personality, all who knew him would agree. But the fact remains that he failed to appreciate the new surgery introduced by Lister, which was enthusiastically taken up by the younger men, such as Marcus Beck. It is not wanton disparagement to say this, merely the truth. Marshall was by no means alone; I doubt if a single senior surgeon in London adopted Lister's methods for many years after they were promulgated.

I am, Sir, yours faithfully,

Edinburgh, Nov. 6th, 1923. E. SHARPEY SCHAFER.

PRIVATE WARDS IN LONDON HOSPITALS.

To the Editor of THE LANCET.

SIR,—In reference to the article contained in the last issue of THE LANCET I am writing to point out that the Victoria Hospital for Children has private wards containing a total number of 14 beds. Visitors may attend daily. By opening this home the committee believe that they are supplying a much-needed want, and that many parents will be glad to secure for their children the treatment, nursing, and other advantages of a leading institution. The home is adjacent to the institution, which itself is situated in the quiet residential district of Chelsea, and the private wards overlook open grounds many acres in extent. There is a separate kitchen and kitchen staff. The terms are £1 per day or £5 5s. per week. When admitted the patient must be under the care of a consultant of one of the recognised hospitals of London. The attendance of the hospital's resident medical officer is free of charge.

I am, Sir, yours faithfully,

D. ST. JOHN BAMFORD,
Secretary, Victoria Hospital for Children,
Nov. 5th, 1923. Chelsea, S.W.

*** We welcome the information contained in this letter. The list given in our last week's issue purported mainly to show what accommodation in private wards was available for adults.—ED. L.

NEW YORK LARYNGOLOGICAL SOCIETY.—The coming celebration of the fiftieth anniversary of the founding of this society, which will take place on Nov. 15th, commemorates an event of unusual interest. As far as can be learned, this organisation, now the Section in Laryngology of the New York Academy of Medicine, is the oldest society in existence of the department which it represents. In connexion with the celebration there will be an exhibition representing the important contributions made to the progress of laryngology in the city of New York.

Obituary.

PETER WALLWORK LATHAM, M.D. CAMB., F.R.C.P. LOND.,

LATE DOWNING PROFESSOR OF MEDICINE IN THE UNIVERSITY OF CAMBRIDGE.

WE regret to announce the death of the venerable Prof. Peter Wallwork Latham, senior Fellow of the Royal College of Physicians of London, which occurred at Clifton on Oct. 29th, a few days after his ninety-first birthday. With him passes a great physician, teacher, and personality; double first in class lists, university professor, consulting physician, and keen pathologist, he was throughout his very prolonged life an outstanding figure in the medical profession.

Latham was the eldest son of a Lancashire general practitioner, and went while quite young to the University of Glasgow, whence he obtained a scholarship at Gonville and Caius College, Cambridge. There he graduated as a wrangler, and in the following year divided with Prof. George Henslow, the eminent botanist, the honour of composing the first class in the Natural Science tripos. He then studied in Germany, and for a brief period was assistant physician to the Westminster Hospital, but quite soon, and some 60 years ago, he returned to Cambridge as Fellow of and medical lecturer at Downing College, being at the same time elected physician to Addenbrooke's Hospital and University reader in medicine. In 1874 he was appointed Downing Professor of Medicine, a chair which he held for 20 years.

His association with Downing College was long and fruitful. On his election to the Society the College was in a very bad way. Sir George Downing, a local baronet with an odd family history, had left a will directing trustees, failing the establishment of next of kin, to purchase land and erect a college at Cambridge bearing his name. The will was made in 1717 and was proved at his death in 1749, when the relatives were dead without issue, and the trustees were all dead also. Profuse litigation resulted. It was not till 1769 that a judgment was obtained that the trusts should be carried into execution, but the estates were in the possession, illegal it would seem, of the devisees of Downing's widow, and the charter for the College was not obtained until 1800, 83 years after the will was made. Starting in such circumstances and with the estate immediately crippled by building, the College nearly died before it lived; practically no undergraduates matriculated, and the College consisted of two or three Fellows and a group of Fellow-commoners. Latham, upon election as a Fellow, devoted time and great business capacity to the drafting of new statutes, thus bringing the College up to a good position in the University, while the establishment of professorships in law and in medicine secured from the beginning the adherence of a certain number of distinguished men.

Prof. Latham's association with the Royal College of Physicians of London was very close and distinguished. He became a Fellow in 1866, and 20 years later was elected to the Council, being the first provincial physician to serve on that body. In that year he delivered the Croonian lectures, taking as his subject the pathology of rheumatism, gout, and diabetes. These lectures, which were published in our columns, endeavoured to indicate the changes in the nervous system, the blood, and the tissues which may take place in the three diseases, and their text was furnished by a suggestion from Sir James Paget that "disturbance in the nervous system in some form and part may be regarded as a fact in every case of gout." Applying similar generalisations to rheumatism and diabetes, Latham illustrated his theory of their pathology with far-reaching clinical references and in particular with elaborate chemistry. He was a Censor of the College in 1887–89, and in 1888 was appointed Harveian Orator, when his oration, which was published in THE LANCET,[1] was a highly interesting plea to working pathologists to search out the secrets of medicine by way of experiment. He paid his tribute to Harvey by dwelling upon the latest advances in pathological knowledge, saying that they had been gained by the simple, patient investigation of nature which Harvey had pointed out as the guiding principle of all genuine seekers after truth, and his philosophic discourse was well calculated to quicken the spirit of investigation.

Prof. Latham was in practice in Cambridge for half a century, and on leaving the city in 1912 received a remarkable series of presentations from the medical men in the neighbourhood. He was twice married, first to the daughter of John McDiarmid of Dumfries, by whom he had two sons and one daughter, and secondly to the daughter of the late Dr. J. F. Bernard of Clifton. Prof. Latham's daughter, who survives him, is the wife of Lord Clyde, Lord-Justice-General of Scotland, but his two sons predeceased him, one, a soldier, dying from injuries received at polo, the other being the late Dr. Arthur Latham whose great loss to British medicine we have recently sustained.

[1] THE LANCET, 1888, ii., 1715.

PERCY WHITTINGTON SAUNDERS, M.B. TORONTO, F.R.C.P. LOND., M.R.C.S. ENG.

Dr. Percy Saunders, who died on Nov. 1st, had already been ill for some time, when a flare-up of his disease about six months ago necessitated complete rest from his numerous activities. Born in Toronto in 1877, Saunders took his B.A. degree in that city in 1898 and his M.B. in 1902, when he also gained the gold medal. Coming to this country in pursuit of extended knowledge and experience, he worked for some time at the London Hospital and took the M.R.C.S., L.R.C.P. diploma in 1905. He also held several appointments at the Victoria Park Chest Hospital and a the Shadwell Children's Hospital. He then went to the National Hospital for Paralysis and Epilepsy, Queen-square, where he was first house physician and resident medical officer, and later registrar, being afterwards appointed on the staff as assistant physician. He was also physician to the Royal Free Hospital and was elected F.R.C.P. in 1917. He was an excellent teacher and a hard and industrious worker; the strain imposed on him during the war, when he was often doing two or three men's work, must have made excessive demands on his strength, and probably undermined his resistance and paved the way for the onset of his fatal illness. Naturally modest and retiring, Saunders was not a man of many friends, but those who knew him well soon recognised, beneath his quiet and somewhat deprecatory manner, the sterling character of the man, and the solidity and soundness of his judgment in medical matters, founded as it was on a wide and deep acquaintance with clinical medicine and medical literature. His hospital rounds were marked by a wise deliberation and by great kindness to his patients. His early training had also imbued him with classical knowledge and a taste for classical literature, and although he did not write much, what he did write was characterised by clear thinking and lucid and tasteful expression.

Dr. Saunders will be greatly missed by colleagues, students, and patients alike, and much sympathy is felt with his parents in their distant home, all the more in that they lost another son in the war.

WILLIAM HALL, M.R.C.S. ENG.

THE death of Dr. William Hall, at the age of 89, took place recently at Headingly. Seventy years ago he began his professional career as apprentice to Dr. Samuel Radcliffe, of Leeds. After studying at Leeds Medical School and Guy's Hospital, Dr. Hall became M.R.C.S. and L.S.A. in 1855. He was for some time lecturer on midwifery and diseases of women and children in the Leeds School of Medicine and Surgery, and a surgeon at the Leeds Hospital for Women and Children. He was the founder of the Leeds Barefoot Mission which preceded the "Boots for the Bairns"

Fund, and long before the question of feeding necessitous school-children was raised in Parliament he was a pioneer in this work. His work as a factory surgeon in the "seventies" made him familiar with the needs and requirements of child workers, and one of his great objects in life was concern for the improvement of the health and physique of children. Retiring from active practice in 1902, the next ten years of his life were devoted to a continuation of his efforts for the promotion of the social well-being of the community. In 1905 his practical effort found expression by supplying 60 poor school-children with half a pint of milk and a bun each day, much to the improvement of their health, and later on the scheme was extended, so that breakfasts and dinners were supplied to 100 school-children. Within a short time he raised £1000 for this purpose, and thus anticipated by 15 years both the medical inspection and the feeding of school-children by the State. Dr. Hall leaves two sons and one daughter; the elder son is Dr. Robert H. Hall, of Leeds, who succeeded to his father's practice, and the second son is Mr. John Basil Hall, honorary consulting surgeon to the Royal Bradford Infirmary and President-elect of the British Medical Association.

THE LATE DR. G. D. MAYNARD.

WE briefly noted last week the untimely death at Johannesburg of Dr. George Darell Maynard and the loss entailed to statistical medicine. Dr. Major Greenwood writes:—"The news of Dr. Maynard's death is very grievous. He was unquestionably one of the foremost medical statisticians in the world, and a paper published as recently as last March[1] showed that, although he was no longer able to devote the whole of his time to research, we might expect a long series of important contributions from his pen to statistical science. Maynard not only had a thorough grasp of mathematical principles (as shown in a joint paper by himself and Dr. Troup on a very technical point of mathematical theory), but great critical powers. His earlier work on the statistics of anti-typhoid inoculation, and more recent studies of pneumonia, were good examples of the application of statistical canons of criticism. In his work on cancer and diabetes a flair for original investigation was manifest. Maynard's demonstration of a high correlation between the death-rates of cancer and of diabetes in American experience was a remarkable piece of work. The whole field was worked over again by Prof. Karl Pearson and Dr. Alice Lee, and also by the late Frances Wood and myself. The most sedulous re-examination of the data failed to reveal any error in Maynard's work, and the interpretation of his results must still be looked for; it is clear that the results are correct. It was an immense gain for biometric science that a man who had had wide clinical experience should devote himself to statistical inquiry. Maynard and Dr. John Brownlee were, in fact, the only medical statisticians of the first rank who had had such experience. The loss is irreparable. It is the more bitter in that Maynard's personal qualities endeared him to all who knew him. He was no dry-as-dust manipulator of figures, but a delightful companion. The statisticians in the National Institute of Medical Research will never forget the visit he paid us last year and his stories of campaigning experiences in the war. The loss is indeed irreparable, but yet the future of a branch of science that can arouse the enthusiasm of such a man is assured. We are the poorer by his loss, but his example has given us courage to go on."

MEMORIAL TO THE LATE DR. H. D. FARNELL.—A committee has been formed to consider the form of the memorial to Dr. Farnell, under the presidency of the Mayor of Eastbourne, Councillor G. B. Soddy. It is hoped that a sum of £10,000 may be raised, and though the nature of the memorial has not yet been decided on, it will probably be in association with Princess Hospital, to which Dr. Farnell was for long attached.

[1] Biometrika, xiv., p. 337.

Medical News.

UNIVERSITY OF OXFORD.—In a Congregation held on Oct. 18th the degree of Bachelor of Medicine was conferred on T. A. Brown, Exeter College.

The Whitley Professor of Biochemistry, Dr. R. A. Peters, will deliver an inaugural lecture in the Examination Schools on Wednesday, Nov. 14th, at 5 P.M., the subject being A Wonderland of Chemistry.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the Final Examination held from Oct. 2nd to 26th the following candidates were approved in the undermentioned subjects:—

Medicine.—M. V. Abraham, Manchester; Iris I. G. Adams, Royal Free and St. Mary's; J. N. Alexander, Guy's; A. E. Austen and R. T. Bannister, St. Bart.'s; J. Bee, London; E. R. Bennion, Westminster; C. E. W. Bower, Manchester; Annie Bryce, Birmingham; H. D. Chalke and J. H. H. Chataway, St. Bart.'s; M. N. Chatterjee, Birmingham; R. Chester, Leeds; R. G. Cochrane and T. S. Cochrane, St. Bart.'s; A. Cooke, Liverpool; A. M. Cooke, St. Thomas's; Rosemary Cooke, Charing Cross; Elizabeth M. Cowie, Royal Free; G. I. Davies, Univ. Coll.; T. Davies, St. Bart.'s; Dorothy L. C. Day, London; A. M. Deane, St. Thomas's; J. A. F. Denyssen, Guy's; C. J. C. De Silva, Middlesex; B. Dous, St. Bart.'s; J. Dreadon, Otago; C. L. Elgood, St. Bart.'s; V. H. Ellis, London; Sarah Evans, Charing Cross; H. P. Goldsmith and A. W. Grace, Univ. Coll.; C. W. Greenaway, Guy's; A. B. Griffiths, Liverpool; L. W. Hale, Univ. Coll.; C. S. Hallpike, Guy's; J. E. S. Hamilton, Bristol; Leila M. Hawksley, Royal Free; Margaret R. Herford, Royal Free and St. Mary's; E. W. Hicks, St. Thomas's; Gabrielle M. Highfield-Jones, Charing Cross; H. A. Hirst, London; Margaret Hossell and Dorothy P. Hytch, Royal Free; D. E. Joscelyne and P. C. Joscelyne, Bristol; A. K. Kerr, St. Bart.'s; H. B. L. Levy, Durham; G. Lucas, London; Kathleen M. Lyons, Univ. Coll.; N. W. MacKeith, Guy's; J. R. A. Madgwick and Dorothy B. Marling, London; K. F. T. Mills, Middlesex; H. S. Morley, Univ. Coll.; L. Morris, Manchester; E. V. Newling, Middlesex; I. Newton, Charing Cross; Frances L. Nichol, Royal Free; R. D. Owen, Guy's; C. Panchalingham, Ceylon; Isabel D. Patterson, London; J. F. Payan, Guy's; Eleanor M. Pulleine, St. Mary's; W. A. Robb, St. Bart.'s; F. Robinson, Manchester; S. C. Rowbotham, Guy's; R. W. Savage, St. Bart.'s; F. L. Scott, King's Coll.; F. A. H. Simmonds, St. Bart.'s; T. H. Sims, St. Thomas's; A. E. Slinger, King's Coll.; Beatrice M. Smyth, London; W. R. Spurrell, Guy's; R. H. Stanbridge, London; E. B. Strauss, King's Coll.; A. K. Thomas, Univ. Coll.; K. W. Thorp, St. Thomas's; R. J. Toleman, Cardiff and London; B. D. Underwood, London; B. M. R. West, Middlesex; H. J. W. J. Westlake, Guy's; H. A. M. Whitby, St. Bart.'s; Joyce E. M. White, London; G. W. Wigg, Durham; R. C. Williams, Birmingham; and Cicely F. Wilson, Bristol.

Surgery.—C. F. Ashby, St. Bart.'s; J. Atkin, Guy's; Muriel E. Binns, Royal Free; R. A. Brews, London; W. Brockbank, Cambridge and Manchester; R. E. D. Cargill, St. Bart.'s; Nora Cheney, King's Coll.; R. Chester, Leeds; H. G. Close, Guy's; T. S. Cochrane, St. Bart.'s; Catherine A. Cowan, Royal Free; Vera Cullwick, Birmingham; Charlotta D. N. De Wilde, London; C. K. D. Edwards, Liverpool; G. Elliot and J. Elgood, St. Bart.'s; N. J. England, Bristol; T. J. Evans, Middlesex; G. H. Froggatt, Sheffield; D. Frost and I. Gluckman, London; W. E. Grice and G. J. Griffiths, Middlesex; C. S. Hallpike, Guy's; J. G. Hamilton, London; Greta Hartley, Royal Free; R. C. Hatcher, Bristol; E. F. Hewlitt, Guy's; J. A. Hislop, Durham; H. Jaffe, Manchester; A. T. Jones, Univ. Coll.; I. S. Jones, Liverpool; E. F. King and F. Langford, Bristol; N. E. Laurence, St. Bart.'s; O. B. Lean, Univ. Coll.; R. R. Macintosh and H. Maclachlan, Guy's; H. B. Mann and F. B. Matthews, Middlesex; W. W. McLean, St. Thomas's; M. Meyers, St. Bart.'s; S. M. Milner, Manchester; W. E. Moody, St. Mary's; L. Morris, Manchester; C. J. Murphy, Birmingham; T. J. O'Donnell, London; L. E. Owen and W. F. Payne, Guy's; M. S. Pembrey, St. Bart.'s; M. Rubinstein, Guy's; R. W. Scarff, Middlesex; M. B. Seng, Guy's; H. Sheard, Leeds; N. Smith, St. Bart.'s; R. S. Starkey, St. Thomas's; C. R. Steel, St. Bart.'s; E. G. Steeler, St. George's; D. M. E. Thomas, St. Mary's; J. H. G. Thompson, St. Thomas's; C. A. Van Rooyen, London; L. J. Watkins, St. Thomas's; Dorothy A. Waterfield, London; Fanny M. Whittaker, Charing Cross; T. M. Wilks, King's Coll.; and B. H. H. Wooderson, London.

Midwifery.—S. Abadir, King's Coll.; N. J. Ainsworth, Middlesex; G. T. Allerton, London; Kathleen D. Arnsby, Royal Free; R. N. Aston, St. Bart.'s; Kathleen J. Atkinson, King's Coll.; H. Aukland, Liverpool; K. Bandaly, Univ. Coll.; R. T. Bannister, St. Bart.'s; M. Bannounah, Guy's; D. T. Barnes, St. Bart.'s; E. V. Barnes and J. C. Barrett, St. Thomas's; I. M. Benjamin, Guy's; A. G. Bewes, St. Thomas's; Muriel E. Binns, Royal Free; Phyllis E. Bond, Univ. Coll.; H. B. Boucher, St. Thomas's; Margaret Bowstead, Royal Free; W. H. Bradley, Guy's; Stella M. Brown, King's Coll.; Annie Bryce, Birmingham; Hilda L. Byett, Royal Free; A. Canard, Guy's; K. Chaudhri, St. Mary's; C. F. Chissell, Middlesex; Edith I. Clark, Univ. Coll.; W. Clark, Charing

Cross; G. C. W. Clarke, Sheffield; Winifred M. Clement, Charing Cross; R. G. Cochrane, St. Bart.'s; C. D. Cogswell, King's Coll.; I. Cohen, Middlesex; G. E. C. Collis, Univ. Coll.; C. K. Colwill, Guy's; A. Cooke, Liverpool; H. A. Cooper, King's Coll.; A. B. Cowley, St. Bart.'s; Vera Cullwick, Birmingham; D. V. Davies and J. R. Davies, St. Thomas's; L. F. Davies, Guy's; L. Davies, Liverpool; C. H. Devereux, Univ. Coll.; Georgina R. Dunn and Lorna Dunn, Bristol; J. D. Durance, St. Mary's; Kathleen H. Durance, Royal Free; R. H. Dyer, King's Coll.; R. M. Ealand, Bristol; J. T. R. Edwards, St. Bart.'s; L. C. Edwards, London; Mary G. H. Edwards, St. Mary's; W. Egan, Charing Cross; A. Elliot Smith, Univ. Coll.; N. J. England, Bristol; Phyllis V. L. Epps, Royal Free; Ann C. Evans, Cardiff; T. I. Evans, St. Thomas's; T. P. Evans, Charing Cross; S. A. M. Fam, King's Coll.; Edith M. Field, Royal Free; L. Freeman, St. Thomas's; W. S. Fricker, King's Coll.; A. T. Fripp, Guy's; E. B. Garrett, Univ. Coll.; P. Garson, St. Bart.'s; D. R. Gawler, King's Coll.; P. L. Goltein, St. Mary's; A. W. Grace, Univ. Coll.; H. Graf, Liverpool; F. H. K. Green, St. Bart.'s; F. N. Green and A. B. Griffiths, Liverpool; H. Hamilton, London; N. W. Hammer, Middlesex; Gabrielle M. Highfield-Jones, Charing Cross; C. G. Harper, Middlesex; I. Harris, Westminster; J. Hartsilver, St. Bart.'s; N. H. R. Hatfield, St. Mary's; Leila M. Hawksley, Royal Free; J. B. Hayes, Charing Cross; L. I. Henzell, Univ. Coll.; W. A. Hervey, St. Bart.'s; E. W. Hicks, St. Thomas's; A. C. Hill, Univ. Coll.; J. A. Hislop, Durham; R. G. Hodder, St. Thomas's; J. Holmes, St. Bart.'s; Barbara M. Hope, King's Coll.; D. V. Hubble, St. Bart.'s; W. Hughes, Middlesex; R. G. W. Husbands, Univ. Coll.; Dorothy P. Hytch, Royal Free; M. H. Jacobs, Guy's; H. N. James, St. Mary's; I. L. Johnstone, Middlesex; A. T. Jones, Univ. Coll.; A. Jowell, Guy's; L. C. Kalra, Charing Cross; A. C. King, London; G. M. King, King's Coll.; A. H. Kynaston, St. Bart.'s; G. S. Landon and S. A. Leader, Guy's; C. H. Lee, London; H. Levit and F. J. Levy, Guy's; H. B. L. Levy, Durham; H. M. Levy, Middlesex; E. I. Liberman, Guy's; E. O. Lloyd, Middlesex; H. Lord, Univ. Coll.; G. Lucas, London; G. A. McKaig, St. Thomas's; N. W. MacKeith, Guy's; A. V. Mackenzie, St. Bart.'s; J. H. Macpherson, King's Coll.; G. S. Malik, Univ. Coll.; Marion A. N. Marshall and Nancy S. Marshall, St. Mary's; E. L. Martin, Charing Cross; R. Massingham, Univ. Coll.; J. H. Matthews, Manchester; W. A. Mill, Guy's; A. J. Moody, St. Bart.'s; V. M. Morris and S. G. Mozumder, Middlesex; M. Murad and C. J. Murphy, Birmingham; W. R. Nash, St. Bart.'s; T. K. Natesan, Madras and London; E. V. Newling, Middlesex; C. T. Norris, London; K. C. L. Paddle, St. Bart.'s; C. Panchalingham, Ceylon; G. W. C. Parker, St. Bart.'s; G. F. S. Parker, Manchester; Lucy Parker, Royal Free; T. G. W. Parry, Guy's; V. Patrick, Manchester; W. F. Payne, Guy's; Dorothy E. Peake, London; G. M. Pennant, King's Coll.; A. Perkoff, London; S. W. Phoon, Guy's; P. J. J. Pienaar, St. Thomas's; E. B. Pollard, St. Bart.'s; Louisa M. Poynder, Charing Cross; J. O. Priestley, Middlesex; Winifred M. Proctor, Durham; Violet A. Quilley, Royal Free; V. I. Raman, London; R. H. T. Rea, St. Thomas's; T. S. Read, King's Coll.; E. J. Rees and W. E. Rees, St. Thomas's; H. D. C. Rice, King's Coll.; C. B. Rich, Charing Cross; F. Robinson, Manchester; R. E. Robinson, Guy's; Annie E. G. Rowlands, Univ. Coll.; M. Rubinstein, Guy's; E. Rudge, St. Bart.'s; F. R. Sandford, Middlesex; F. E. E. Schneider, Univ. Coll.; F. L. Scott, King's Coll.; A. de M. Severne, St. Thomas's; H. Sheard, Leeds; A Sherning, St. Thomas's; I. M. Sidley, St. Bart.'s; R. F. Smith, Guy's; J. A. Smorfitt, Leeds; I. Spiro, Univ. Coll.; Ethel L. A. Stamberg, Royal Free; A. W. Summersgill, Manchester; G. E. F. Sutton, King's Coll.; H. Taylor, London; M. Taylor, Guy's; A. K. Thomas, Univ. Coll.; O. O. S. Thomas, St. Mary's; W. G. Thwaites, St. Thomas's; R. W. H. Tincker, St. Bart.'s; R. J. Toleman, London; A. Tom, Guy's; G. M. Tothill, Charing Cross; C. H. C. Toussaint, Guy's; Henrietta Trend, Royal Free; V. C. Tughan, Univ. Coll.; Mary M. Turnbull, King's Coll.; Cicely N. Twining, Royal Free; B. D. Underwood, London; Hermione M. Usborne and Dorothy M. Vaux, Royal Free; I. R. Vermooten, Guy's; F. O. Walker, Middlesex; Constance Walters, Cardiff; J. L. Warner, Middlesex; H. O. Watkins-Pitchford, St. Thomas's; A. Watson, St. Mary's; M. A. Wiles, King's Coll.; E. R. Williams, Cardiff; H. H. Williams, Liverpool and Middlesex; R. C. Williams, Birmingham; W. M. Winder, St. Mary's; R. H. Yelf, King's Coll.; and G. C. Young, St. George's.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—Since the quarterly meeting of the College, reported in THE LANCET of Nov. 3rd, the Licence has been granted to Charles Henry Newman and Muriel Alice Stephens of King's College Hospital.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The following candidates have passed the Final Dental Examination and have been granted the diploma L.D.S. R.C.S. Edin.:—

John B. Forgan, Bernard S. Reynolds, James G. Mackintosh, Pratap Singh Khosla, James W. Sykes, William R. Galloway, Robert G. Law, Douglas J. Kynoch, McGregor McLean, Nina Borrie Duncan, Joseph S. Sirey, John G. McClean, Lourens Wepener Ackermann, Charles E. Atkinson, Frank W. Walmsley, Alexander N. Wight, Robert Lauchlan, Archibald T. Donaldson, John Dewar, Kathleen M. Scott, Nico Hofmeyr Bartmann, Douglas R. Forster, John D. Riddell, Richard F. Pagnam, and Andrew R. Brown.

The following candidates passed in the subjects of Pathology, Medicine, and Surgery: John Murphy, Thomas Jamieson, John Campbell, and Orry Smedley Crowthers.

The following candidates passed in the subjects of Medicine and Surgery: Frederick A. Hunter and Edward N. Jamieson.

UNIVERSITY OF DUBLIN, SCHOOL OF PHYSIC, TRINITY COLLEGE.—At examinations held recently the following candidates were successful:—

FINAL MEDICAL EXAMINATION.

Part I., Materia Medica and Therapeutics; Jurisprudence and Hygiene; Pathology and Bacteriology.—John F. Wilde (passed on high marks), Thomas W. MacDowell, Thomas C. Foster, William J. A. M'Mahon, Mary C. Livingston, Charles F. D. M'Caldin, Gladys M. A. Lowry, William H. Coen, Philip Coleman, Richard T. Cronin, Mary Galvin, George A. Miller, James J. Cusack, Augusta M. Young, and William O. Warrington.

IN COMPLETION.

Gordon P. Bamford, Denis J. Cussen, John Cussen, Edward C. Dudgeon, Charles J. du Plessis, Robert W. Harte, Launcelot W. R. Haskins, John M. Johnston, Christopher Lord-Flood, Robert H. M'Keag, Kenneth F. Mackenzie, William H. Maguire, Henry M. Nevin, David N. Power, Frederick M. Purcell, John St. Clair, Israel Strasburg, François J. Swanepoel, and Carmichael Wilson.

DIPLOMA IN PUBLIC HEALTH.

Part I.—Frederick Stevenson, William B. E. M'Crea, George C. B. Robinson, and Richard Seale.

Part II.—Frederick Stevenson, William B. E. M'Crea, Patrick M. J. Bobbett, George C. B. Robinson, and Richard Seale.

UNIVERSITY OF PARIS.—An honorary degree in medicine is to be conferred upon Prof. Camillo Golgi, of Pavia, and Prof. W. W. Keen, of Philadelphia, in the amphitheatre of the Sorbonne on Nov. 24th. Sir J. J. Thomson will receive an honorary degree in science at the same time.

PAPWORTH VILLAGE SETTLEMENT.—A private view of a film illustrating the work of this settlement will be held at the Gaumont Co.'s Projection Theatre, Sherwood-street, Piccadilly Circus, London, W. 1, on Nov. 15th at 4 P.M.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL.—The new school of dental surgery will be opened on Nov. 12th, at 4.45 P.M., when the inaugural address will be given by Mr. F. Dyke Acland, chairman of the Dental Board, Lord Hambleden presiding.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—The fifth series of lectures given at this hospital on Thursdays, at 5 P.M., to practitioners and students is now in progress. On Nov. 8th Dr. C. H. Roberts gave the first lecture on Hæmorrhages in Early Pregnancy. Subsequent lectures will be announced in our Medical Diary.

GLASGOW UNIVERSITY CLUB, LONDON.—Th's club will dine at the Trocadero Restaurant, London, W., on Dec. 6th, at 7.30 P.M., Sir William Leishman, F.R.S., presiding. Any Glasgow University men not members of the club, who desire to attend, are requested to communicate with the hon. secretaries, 1, Harley-place, London, N.W. 1.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—The past and present students' dinner will be held in the King's Hall, Armstrong College, Newcastle-on-Tyne, on Tuesday, Nov. 27th, at 7.30 P.M., Sir David Drummond presiding. Tickets at 10s. 6d. may be obtained from the Hon. Secretary, Re-union Dinner Committee, College of Medicine, Newcastle-on-Tyne.

SMALL-POX IN ENGLAND AND WALES.—During the week ended Oct. 27th, 22 cases of small-pox were notified in England and Wales, with the following distribution: Durham, 2 (Southwick-on-Wear); Gloucestershire, 7 (Gloucester 5, "including 2 cases notified as chicken-pox but rediagnosed as small-pox," East Dean R.D. 1, Gloucester R.D. 1); Northumberland, 1 (Tynemouth); Notts, 10 (Hucknall, 9, Kirkby-in-Ashfield, 1); Yorks North Riding, 1 (Middlesbrough); Yorks West Riding, 1 (Adwick-le-Street).

ROYAL SANITARY INSTITUTE.—A sessional meeting will be held on Nov. 17th, 1923, in the Council Chamber, Town Hall, Ipswich, when discussions will take place on Sewage Disposal, to be opened by Mr. E. J. Silcock, followed by Mr. H. C. H. Shenton and others; and on Tuberculosis in Milk to be opened by Dr. W. F. Corfield, followed by Dr. A. M. N. Pringle and others. The chair will be taken at 10.30 A.M. by Dr. Louis C. Parkes. At 2 P.M. visits will be paid to the public health office, sanatorium, isolation hospital, electricity station and destructor, new water works, new baths, and Messrs. Harris (Ipswich), Ltd., bacon factory.

A meeting will be held at the Institute, 90, Buckingham Palace-road, London, S.W., on Nov. 26th, when Miss Muriel A. Payne, hon. secretary, International School of Nursing and Child Welfare for Russia, will give an address on Sanitary Relief Work in Russia. The chair will be taken at 5 P.M. by Dr. Louis C. Parkes.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—A meeting will be held in the board room of the Miller General Hospital, Greenwich, to-day, Friday, Nov. 9th, at 8.45 P.M. Dr. E. G. Annis, the President, will occupy the chair, and Dr. Hildred Carlill will read a paper on Tabes Dorsalis.

ROYAL NORTHERN HOSPITAL.—The Prince of Wales will open the new Casualty Department of the hospital (which is the War Memorial of the borough of Islington) on Nov. 27th. Contributions amounting to £12,000 have been received towards the cost of the department, which will be one of the best equipped in London, but a further £4000 are required to open the building free of debt.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.—In connexion with the recent developments at this hospital, and the formation of the London School of Dermatology, a dinner was given at the Trocadero Restaurant last month to Dr. James H. Stowers by his dermatological colleagues. Dr. Stowers was very largely responsible for carrying through the negotiations which have culminated in the present coöperative scheme. His colleagues have recognised the importance of this service, and their appreciation was suitably voiced at the complimentary dinner by Sir Malcolm Morris, who was in the chair, and by Dr. W. Griffith, senior physician to St. John's Hospital.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The next quarterly meeting of the Medico-Psychological Association of Great Britain and Ireland will take place on Nov. 22nd, at 11, Chandos-street, Cavendish-square, London, W., under the presidency of Lieut.-Colonel E. Goodall, at 2.45 P.M. Prof. D. C. Winckler, of the Psychiatric-Neurologic Clinic, Utrecht, will deliver an address on Psychiatrical and Neurological Teaching at the Dutch Universities, especially at the University of Utrecht.

It is proposed to hold a dinner at the Langham Hotel, Portland-place, London, W., on Nov. 22nd, at 7 P.M. for 7.30, in honour of Prof. Winckler. Tickets, 10*s.* 6*d* each, should be procured as soon as possible from the hon. general sec., Dr. R. Worth, Springfield Mental Hospital, nr. Tooting, S.W. 17.

FUSION OF VENEREAL DISEASES SOCIETIES.—At a joint conference between the National Council for Combating Venereal Diseases and the Society for the Prevention of Venereal Disease, held at 1, Wimpole-street, London, W., on Oct. 30th, the following resolutions were adopted:—

1. That the ultimate fusion of the two societies is desirable.
2. Subject to the approval of their respective executives this conference resolves itself into a deputation to the Ministry of Health to urge that "the law should be altered so as to permit properly qualified chemists to sell ad hoc disinfectants, provided such disinfectants are sold in a form approved and with instructions for use approved by some competent authority."
3. That this conference recommends that the respective executives of the two societies should each appoint not more than five members to form a liaison committee between the two societies and to explore the possibility of fusion.

SCIENTIFIC NOVELTIES EXHIBITION.—The exhibition held at King's College during the Christmas holidays, 1922–23, aroused such interest, and was the means of raising so substantial a sum in aid of the hospitals of London, that it has been decided to repeat the experiment this year. The exhibition will be open from Dec. 29th to Jan. 9th (inclusive), between the hours of 2 and 9 P.M., and experiments and demonstrations will be going on continuously during this period, as on the last occasion. Short lectures with experimental or lantern illustrations will also be given, and promises of such lectures have already been received from Prof. Cheshire, Prof. Winifred Cullis, Prof. Eddington, Sir Richard Gregory, Prof. Morley Davies, Prof. Smithells, and others. The proceeds will be given to King Edward's Hospital Fund for London.

TUBERCULOSIS SOCIETY.—An ordinary meeting of the Society will be held on Nov. 16th, at 8 P.M., at 1, Upper Montague-street, Russell-square, London, W. Dr. Evrot (Comité National de Défense Contre la Tuberculose) will read a paper on Tuberculosis in France, and the relationship of tuberculosis officers to local infirmaries will be discussed. On Dec. 14th Mr. R. Milne will discuss Operative Fixation for Caries of the Spine. On Jan. 18th, 1924, Dr. A. S. MacNalty will speak on Tuberculosis Work in England. On Feb. 15th Dr. Clive Riviere will give a lecture on Artificial Pneumothorax. The meeting on March 21st will be devoted to considering the Tuberculosis Work of the Ministry of Pensions, Administrative and Clinical, when Dr. G. Basil Price and Dr. Alex. Sandison will read papers. On April 18th there will be a provincial meeting, and on May 16th a member of the National Tuberculosis Association of America will discuss Tuberculosis Work in America. On June 20th the annual meeting will be held. Meetings will be held at Margaret-street Hospital, Margaret-street, W., at 8 P.M., unless otherwise announced.

LIVERPOOL MEDICAL INSTITUTION: BIENNIAL DINNER.—On Nov. 1st Sir Arthur Keith was entertained as the guest of the evening at a dinner attended by 150 members. Dr. Hill Abram presided. The health of the Liverpool Medical Institution was proposed in a spirit of delicate banter by Prof. Campagnac. He declared himself an admirer of the good old days, and trusted that the profession would maintain its reputation for urbanity, refinement, sage counsel, and good friendship. He reminded his hearers that unless they understood their patients as men they could do them little service as doctors. "The Guests" was proposed by Mr. F. C. Larkin in happy vein, and Sir Arthur Keith replied with a light touch and a sure instinct for the right word. He spoke of the law of relativity in relation to life and medicine, and he told of men he had known as not too brilliant students, now themselves teachers and impatient of the stupidity of those they had to teach, forgetful of the passage of the years in which they had been gathering wisdom. He glanced at Bernard Shaw's picture of the span of human life lengthened out to 300 years or more, and painted the misery of the young men who, he sometimes thought, would be better pleased with an age limit of, say, 35. The President of the Chester Medical Society also spoke.

CONFERENCE OF CREMATION AUTHORITIES.—Under the auspices of the Cremation Society of England, a conference was held on Oct. 25th at the Town Hall, Liverpool. The conference was opened by the Lord Mayor of Liverpool (Mr. F. C. Wilson) and Dr. Herbert T. Herring occupied the chair. In his address Dr. Herring referred to the enormous advantages which the universal adoption of cremation would confer upon the community. Its progress had been slow, but it now looked as if we were on the threshold of great developments in this direction, requiring only the combined effort of all to make cremation the usual and accepted method of reverent disposal of the dead. With regard to propaganda, Dr. Herring recapitulated the proposals made at the conference held in 1922; these were briefly as follows: Advocacy of the æsthetic side of cremation rather than of the indisputable sanitary advantages; advertisement in the public press, and by propaganda literature; removal of the fear of concealment of crime; encouragement of the public to visit crematoria; popular lectures; and the obtaining of signatures to the form "requesting cremation at death." Many, if not all, of these suggestions had been acted upon during the last 12 months, to the advantage of the movement; prominence had been given to the idea of the "Garden of Rest" for the undisturbed repose of ashes and incidentally for the solution of the cemetery problem. Improvements had been effected in buildings, and all jarring notes during the cremation ceremonial had been removed. With regard to press announcements and distribution of literature, the Cremation Society of England alone distributed by various means some 60,000 books and leaflets. When it was known that inspection was invited, 600 people had visited the Bradford crematorium in one day. The secretary of the Cremation Society reported a steady increase in the number of names registered, as well as in the number of persons who have effected prepayment for their ultimate cremation by joining the Society. Following Dr. Herring's address, a letter from the International Conference on Cremation, held at Gothenburg on August 30th and 31st and Sept. 1st, signed by Mr. J. Schlyter (hon. director, Swedish Cremation Union) and Mr. F. Mencl (Cremation Society of Czecho-Slovakia) was read, in which it was suggested that advantage should be taken of the exhibition to be held in London in 1924, to include therein a representative cremation exhibition, similar to those held at Maleno in 1914 and at Gothenburg this year; and that the sixth World Conference for Cremation should take place in London in 1924. It was agreed that the latter conference should be of an international character if sufficient support could be obtained. A debate then took place in which speakers from London, Liverpool, Manchester, Birmingham, Hull, Bradford, and South Wales took part. Among the suggestions made were the education of the younger generations through such organisations as the boy scouts and the girl guides, and the approaching of such social and educative bodies as the Rotary Clubs and the Workers' Educational Association, together with requests to the medical faculty, the clergy, and the Association of Undertakers for increasing coöperation with the cremation authorities. Medical support was acknowledged, and the undertakers, it was agreed, had refuted a charge of indifference on their own part. Prof. E. W. Hope, medical officer of health for Liverpool, said that the advantages of cremation were emphasised when, as in Church-street, Liverpool, thousands of bodies had to be removed for re-interment. The greater the pains which had been taken to preserve the bodies by metal coffins and bricked graves or vaults, the more revolting was found to be the condition of the remains when removal was necessary in the interests of the living.

ROYAL SOCIETY.—A Royal Medal has been awarded to Prof. C. J. Martin, F.R.S., for his researches on animal metabolism.

LONDON SCHOOL OF TROPICAL MEDICINE.—The annual dinner will be held on Wednesday, Nov. 21st (7.15 for 7.30 P.M.), at the Hotel Victoria, Northumberland-avenue. Sir Ion Hamilton Benn will preside.

ROYAL MANCHESTER CHILDREN'S HOSPITAL.—The board of the Manchester Children's Hospital has been notified from the Home Office of the King's command that the Children's Hospital shall henceforth be known as the Royal Manchester Children's Hospital.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—In addition to the courses previously announced for this month and now in progress—i.e., gynæcology, psychological medicine, and venereal disease—there will be a series of lecture-demonstrations on children's diseases at the Children's Clinic, Western General Dispensary, from Nov. 12th to Dec. 6th. The subjects dealt with will include gastro-intestinal, respiratory, genito-urinary, and skin affections in children. A special course in ophthalmology will be given at the Royal Westminster Ophthalmic Hospital from Nov. 19th to Dec. 15th, and apart from the clinical instruction each afternoon there will be special demonstrations in medical ophthalmology and methods of examination. During December there will be a refresher course in general medicine and surgery from the 3rd to the 15th at the Hampstead General Hospital, with which will be associated the Hospital for Epilepsy and Paralysis, the North-Western Fever Hospital, and Paddington Green Children's Hospital. The course will be a whole-time one and will include work in all departments. There will also be a course in neurology at the Hospital for Epilepsy and Paralysis, Maida Vale, of which further particulars will be announced later. Full particulars and copies of the syllabus of the foregoing courses will be forwarded on application to the Secretary to the Fellowship of Medicine, 1, Wimpole-street, London, W.

ROYAL MEDICAL BENEVOLENT FUND.—At the last meeting of the Committee 44 cases were considered and £518 12*s.* voted to 38 applicants. The following is a summary of some of the cases relieved.

Daughter, aged 29, of L.R.C.P. & S. Irel. who practised in Liverpool and died in 1919. During the war the applicant was at the Bank of England as a temporary clerk. The temporary staff was dismissed last July and the applicant then came to London to get a post, but owing to being untrained she was unsuccessful. She now asks the Fund to help with training fees as she has only £3 left of her savings. The Committee made a small grant to render the applicant eligible for help from the R.M.B.F. Guild.

Widow, aged 59, of M.B. Aberd. who practised in Norwich and died in 1916. After the death of her husband she went to live with her mother, who had a pension, but she died in November last year. Applicant tried to earn by keeping poultry, but found that she was out of pocket. Her only income is the interest on £100 War Loan and £250 mortgage. She asks the Fund to help her with her rent, which amounts to £13. Voted £15.

Daughter, aged 65, of M.D. Aberd. who was a deputy inspector in the R.N. and died in 1904. Applicant has been living with her sister where they had their rooms free, but applicant developed mental trouble and the trustees of the home said she must find other accommodation. This necessitated her finding a lodging where she would have good attendance and also near her sister. This was secured a few doors away, and the one room and boxroom amounts to a rent of £1 per week. Her income is only £60 per annum. Voted £12 in 12 instalments.

Widow, aged 52, of L.R.C.P. & S. Edin. who practised in Wales and died in 1902. Applicant is a nurse, and has found it difficult to obtain work and has only received £90 in the last nine months. Her rent is £20, and she has to find £50 towards her daughter's board, who is a dental student. Applicant asks for a grant towards her daughter's expenses. The Committee made a small grant to render her eligible for help from the R.M.B.F. Guild.

Widow, aged 30, of L.R.C.P. & S. Irel. who practised in South London and died in August last. Owing to the sudden death of her husband and having two small children the applicant asked the Fund for assistance, and the Committee voted £15.

Widow, aged 35, of M.D. Glasg. who practised in North London and died in 1916. Since the death of her husband the applicant has managed to maintain herself and children, but she now asks the Fund to assist her in the education of her two children, aged 11 and 8 years. The Committee voted a small grant to enable her to receive assistance from the R.M.B.F. Guild, to whom the case was referred.

Daughter, aged 81, of M.R.C.S. who practised in Kent and died in 1868. Applicant was a mental nurse but is now too old to work. Her total income is £50 per annum and her rent amounts to 6*s.* 6*d.* per week. Relieved once, £26 in 12 instalments. The Committee again voted the same amount.

A donation of £2 was received anonymously from Correggio at the beginning of October, and the Treasurer desires to thank the donor and trusts that this acknowledgment will be duly noted. Subscriptions may be sent to the honorary treasurer, Sir Charters Symonds, K.B.E., M.S., at 11, Chandos-street, Cavendish-square, London, W. 1.

Medical Diary.

Information to be included in this column should reach us in proper form on Tuesday, and cannot appear if it reaches us later than the first post on Wednesday morning.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MEETINGS OF SECTIONS.

Monday, Nov. 12th.

WAR: at 5 P.M.
Paper:
Major A. T. Frost, R.A.M.C.: The Present-day Trend of the Treatment of Gonorrhœa, with special reference to Cataphoretic Application of Colloid Silver, to be followed by a discussion opened by Colonel L. W. Harrison, R.A.M.C.

TROPICAL DISEASES AND PARASITOLOGY: at 8.30 P.M.
Presidential Address by Prof. Leonard S. Dudgeon.
Communications:
Dr. Ernest Caroll Faust (Peking Union Medical College): Some Biological and Practical Aspects of Schistosomiasis in China.
Miss G. Le Bas: On the Employment of Fasciola Hepatica as an Antigen for the Serum Diagnosis of Bilharziasis.

Tuesday, Nov. 13th.

THERAPEUTICS AND PHARMACOLOGY: at 4.30 P.M.
Presidential Address:
Prof. A. J. Clark: Commercial Influences in Therapeutics.

PSYCHIATRY: at 8.30 P.M.
Presidential Address:
Dr. T. B. Hyslop: Some Problems of the Future.

Wednesday, Nov. 14th.

SURGERY: SUBSECTION OF PROCTOLOGY: at 5.30 P.M.
Presidential Address:
Mr. Aslett Baldwin: The Causes of Intestinal Disease.

Thursday, Nov. 15th.

DERMATOLOGY: at 5 P.M. (Cases at 4.30 P.M.)
Cases:
Dr. H. W. Barber: (1) Tuberculides associated with Rheumatoid Arthritis; (2) Some cases of Light Sensitisation.
Mr. C. G. Brodie (introduced): Notes on a case of Sclerodermia treated by Polyglandular Extracts.
Other cases will be shown.

Friday, Nov. 16th.

ELECTRO-THERAPEUTICS: at 8.30 P.M.
Paper:
Prof. Leonard Hill: Physiological Effects of Light, to be followed by a discussion.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.
MONDAY, Nov. 12th.—8.30 P.M., Discussion on Constipation from the General Practitioners' Point of View. Introduced by Dr. H. Des Vœux.

ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.
THURSDAY, Nov. 15th.—7.45 P.M., Demonstration of Various Spirochætes. 8.15 P.M., Dr. John Gilks (of Nairobi): Yaws in Kenya Colony, illustrated by lantern slides.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

UNIVERSITY OF LONDON ADVANCED LECTURES IN SURGERY.
MONDAY, Nov. 12th.—(At Guy's Hospital Medical School.) 5.30 P.M., Prof. E. W. Hey Groves: The Treatment of Injuries of the Long Bones produced by Accident or Disease. Third Lecture.
TUESDAY.—5.30 P.M., Last Lecture.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.
MONDAY, Nov. 12th.—10 A.M., Mr. Maingot: Surgical Pathology. 12 noon, Mr. Simmonds: Applied Anatomy. 2 P.M., Mr. Addison: Surgical Wards.
TUESDAY.—10.30 A.M., Dr. Paterson: Medical Wards. 12 noon, Dr. Burrell: Chest Cases. 2.30 P.M., Mr. Tyrrell Gray: Surgical Wards.
WEDNESDAY.—10 A.M., Dr. Saunders: Medical Diseases of Children. 12.15 P.M., Dr. Burnford: Medical Pathology. 3 P.M., Dr. Pernet: Skin Dept.
THURSDAY.—11 A.M., Mr. Simson: Gynæcological Demonstration. 12 noon, Mr. Simmonds: Demonstration of Fractures. 3 P.M., Dr. Scott Pinchin: Medical Out-patients.
FRIDAY.—10 A.M., Dr. Drummond: Gynæcological Operations and Wards. 12 noon, Mr. Endean: Venereal Diseases. 2 P.M., Mr. Sinclair: Surgical Out-patients.
SATURDAY.—9.30 A.M., Dr. Burnford: Bacterial Therapy. 10 A.M., Dr. Saunders: Medical Diseases of Children. 10 A.M., Mr. Banks-Davis: Operations on Throat, Nose, and Ear.
Daily, 10 A.M. to 6 P.M., Saturdays, 10 A.M. to 1 P.M., In-patients, Out-patients, Operations, Special Departments.

ST. JOHN'S HOSPITAL, 49, Leicester-square, W.C.
TUESDAY, Nov. 13th.—5 P.M., Dr. A. M. H. Gray: Externally Produced Eruptions.
THURSDAY.—5 P.M., Dr. M. G. Hannay: Urticaria.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C. 1.

POST-GRADUATE COURSE: OCTOBER–NOVEMBER, 1923.

CLINICAL LECTURES AND DEMONSTRATIONS.

MONDAY, Nov. 12th.—2 P.M., Out-patient Clinic: Dr. Hinds Howell. 3.30 P.M., Epilepsy: Dr. Aldren Turner.

TUESDAY, Nov. 13th.—2 P.M., Out-patient Clinic: Dr. Grainger Stewart. 3.30 P.M., Disorders of Sensation and their Significance: Dr. Hinds Howell.

THURSDAY, Nov. 15th.—2 P.M., Out-patient Clinic: Dr. Kinnier Wilson. 3.30 P.M., Spinal Cord Tumours: Dr. Grainger Stewart.

FRIDAY, Nov. 16th.—2 P.M., Out-patient Clinic: Dr. Gordon Holmes. 3.30 P.M., Surgery of Cerebral Tumours: Mr. Sargent.

COURSE OF LECTURES AND DEMONSTRATIONS ON NEURO-PATHOLOGY.

MONDAY, Nov. 12th.—12 noon, Pathology of the Neuron, II.: Dr. J. Godwin Greenfield.

A COURSE OF LECTURES on the ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM commenced on Oct. 16th.

Mr. Armour and Mr. Sargent operate at the Hospital on Tuesday and Friday mornings at 9 A.M., or at such other times as may be announced.

The fee for the Course, including Pathology, is £5 5s. The fee for the Anatomy and Physiology Lectures is £3 3s. If taken in conjunction with the Clinical and Pathological Courses an inclusive fee of £7 7s. will be charged. Any part of the Course may be taken separately. Special arrangements will be made for those unable to take the whole Course. Fees should be paid to the Secretary of the Hospital at the Office on entering for the Course.

C. M. HINDS HOWELL, Dean of Medical School.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.

THURSDAY, Nov. 15th.—4 P.M., Dr. Hutchison: Wasting.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.

THURSDAY, Nov. 15th.—5 P.M., Mr. J. B. Banister: Forceps in Obstetric Practice.

THE PEOPLE'S LEAGUE OF HEALTH, 12, Stratford-place, Oxford-street, W.

Eight Lectures on the Mind and What We Ought to Know About It, at Hamilton House, Mabledon-place, W.C.

WEDNESDAY, Nov. 14th.—6 P.M., Third Lecture, Dr. R. G. Rows: Association of Ideas, Recognition, and Memory.

ROYAL INSTITUTE OF PUBLIC HEALTH, 37, Russell-square, W.

WEDNESDAY, Nov. 14th.—4 P.M., Mr. W. B. Smith: The Extravagance of a Smoke-polluted Atmosphere.

MANCHESTER ROYAL INFIRMARY POST-GRADUATE CLINIC.

TUESDAY, Nov. 13th.—4.15 P.M., Dr. D. E. Core: Differential Diagnosis of Paralysis Agitans.

FRIDAY.—4.15 P.M., Dr. T. H. Oliver: Physiology and Pathology of Diabetes Mellitus.

SALFORD ROYAL HOSPITAL.

(Special Course on Surgical Tuberculosis.)

THURSDAY, Nov. 15th.—4.30 P.M., Mr. J. B. Macalpine: Renal Tuberculosis.

LIVERPOOL UNIVERSITY POST-GRADUATE LECTURES.

(At 3.30 P.M. each day.)

MONDAY, Nov. 12th.—(At the Hospital for Women.) Dr. Willett: Uterine Displacements.

TUESDAY.—(At the Maternity Hospital.) Prof. Blair Bell: Difficulties and Dangers of the Typical Funnel-shaped Pelvis and Uterine Inertia.

WEDNESDAY.—(At the St. Paul's Eye Hospital.) Mr. Thomas Stevenson and Mr. Gorst: Clinical Cases.

THURSDAY.—(At the St. George's Skin Hospital.) Dr. Barendt: Skin Cases.

FRIDAY.—(At the Eye and Ear Infirmary.) Mr. H. E. Jones: The Differential Diagnosis of Inflammatory Affections of the Eye.

UNIVERSITY OF BRISTOL POST-GRADUATE DEMONSTRATIONS.

WEDNESDAY, Nov. 14th.—(At Swindon), Dr. J. A. Nixon: Diabetes and Modern Methods of Treatment.

Appointments.

CAVE, P. N., M.D., B.Ch. Oxf., has been appointed Medical Officer of Health, West Kent United Districts.

HANDFORD, H., M.D. Edin., Consulting Medical Officer of Health for the County of Nottinghamshire.

HOWELL, B. W., F.R.C.S. Eng., Visiting Surgeon to the Ministry of Pensions Hospital, Shepherd's Bush.

MILLER, J. E. D., M.B., B.S., and GRIFFITHS, J. V., M.R.C.S., L.R.C.P., House Surgeons to the Royal Infirmary, Sunderland.

NEWELL, R. L., M.D. Manch., F.R.C.S. Eng., Honorary Surgeon for Children to the Manchester Northern Hospital.

PEARSON, E., F.R.C.S. Edin., Medical Referee under the Workmen's Compensation Act for County Court Circuit No. 57, Barnstaple, Bideford, South Molton, and Torrington County Courts.

SMELLIE, J. M., M.D. Edin., M.R.C.P., Pathologist at the Queen's Hospital, Birmingham.

Vacancies.

For further information refer to the advertisement columns.

Barnsley, Beckett Hospital and Dispensary.—Sen. and Jun. H.S.'s, £300 and £200 respectively.

Bath, Royal United Hospital.—Hon. Ophth. S.

Belfast, Joint Nursing and Midwives Council.—Examiners of Midwives.

Benenden, Kent, National Sanatorium.—Res. Asst. M.O. £275.

Birkenhead Borough Hospital.—Sen. and Jun. H.S.'s. £200 and £150 respectively.

Birmingham and Midland Eye Hospital, Church-street.—Surg. Reg.

Birmingham, Queen's Hospital.—Med. Reg. £100.

Bristol General Hospital.—Hon. Asst. S.

Bristol Royal Infirmary.—Hon. Asst. Dental S.

British Honduras.—Asst. M.O. $2430.

Bury County Borough.—Asst. M.O.H., &c. £600.

Cambridge, Addenbrooke's Hospital.—H.P. £130.

Cambridge University.—Lecturer in Biochemistry. £350.

Dreadnought Hospital, Greenwich.—H.S. £150.

Eastbourne, Princess Alice Memorial Hospital.—Hon. Ophth. S.

Edinburgh Royal Infirmary.—Supt. £700.

Elizabeth Garrett Anderson Hospital, Euston-road, N.W.—H.P., Obstet. Asst., and Two H.S.'s. Each £50.

Epsom, The Manor.—Jun. Asst. M.O. £300.

Evelina Hospital for Children, Southwark, S.E.—H.P. £160.

Hospital for Sick Children, Great Ormond-street, W.C.—H.S. and H.P. £50.

Indian Medical Service.—Vacancies.

Italian Hospital, Queen-square, W.C.—Hon. Ophth. S.

Leeds Public Dispensary.—Sen. Res. M.O. £200.

London County Mental Hospital Service.—Seventh Asst. M.O. £432.

Londonderry County and County Borough Infirmary.—S.

Maidstone, Kent County Mental Hospital.—Asst. M.O. £350.

Manchester and Salford Hospital for Skin Diseases.—H.S. £100.

Manchester City.—M.O. £620 19s. 9d.

Manchester, St. Mary's Hospitals for Women and Children.—Two H.S.'s. Each £50.

Nottinghamshire County.—M.O.H. £100.

Pontefract, General Infirmary and Dispensary.—Res. Surg. O. £400.

Poplar Hospital for Accidents, East India Dock-road, E.—Sen. Res. O. £275.

Prison Medical Service.—M.O.'s. £432.

Queen Charlotte's Lying-in Hospital, Marylebone-road, N.W.—Two Asst. Res. M.O.'s. £80.

Queen Mary's Hospital for the East End, Stratford, E.—Anæsthetist. 50 guineas.

Queen's Hospital for Children, Hackney-road, Bethnal Green, E.—Asst. Cas. H.S. £100.

St. Albans City.—M.O.H., &c. £900.

St. Peter's Hospital, Henrietta-street, W.C.—Asst. S.

Salisbury Municipality, Rhodesia.—M.O.H. £600.

Sheffield, Jessop Hospital for Women.—Sen. Res. O. £250. Also Two H.S.'s. Each £100.

Wandle Valley Isolation Hospital, Beddington Corner, Mitcham Junction.—R.M.O. £400.

West London Hospital, Hammersmith-road, W.—Hon. Asst. S. to Throat, Nose, and Ear Dept.

Willesden General Hospital, Harlesden-road, N.W.—H.S. £100.

The Chief Inspector of Factories, Home Office, London, S.W., announces vacant appointments at South Petherton (Somerset) and Shifnal (Salop).

Births, Marriages, and Deaths.

BIRTHS.

BARCLAY.—On Nov. 5th, at 2, Greenhead-road, Huddersfield, the wife of Wm. Barclay, M.B., F.R.C.S. Edin., of a daughter.

COOK.—On Oct. 30th, at Lyme Regis, the wife of P. Nield Cook, M.B., of a daughter.

FELDMAN.—On Nov. 1st, at Arkwright-road, Fitzjohn's-avenue, N.W., the wife of Dr. Israel Feldman, of a son.

HASLETT.—On Oct. 30th, the wife of Dr. W. Handfield Haslett, J.P., Halliford House, Shepperton, of a daughter.

MARRIAGES.

PEEBLES—MARSHALL.—On Oct. 30th, 1923, at the Parish Church, Cheltenham, by Rev. Dr. J. D. Mullins, assisted by Canon H. A. Wilson, Rector and Rural Dean of Cheltenham, and Rev. C. H. Lancaster, Vicar of St. John's, Cheltenham, David James, elder son of the late T. S. Peebles, Esq., and Mrs. Peebles, of Dundee, to Marjorie Grace, elder daughter of Mr. and Mrs. Charles Marshall, of Carlton Lawn, Cheltenham.

DEATHS.

EDWARDS.—On August 15th, at the Manchester Royal Infirmary, after operation, John Edwards, M.R.C.S. Eng., L.R.C.P. Edin. & L.M., of Withington-road, Whalley Range, Manchester, aged 69 years. Late Senior Medical Officer, H.M. Prison Service.

HALL.—On Oct. 27th, at Ulidia, Bexhill, Geoffry Craythorns Hall, Colonel, I.M.S. (retired), aged 75 years.

LATHAM.—On Oct. 29th, at York-crescent, Clifton, Bristol, Peter Wallwork Latham, M.D., F.R.C.P., aged 91 years.

SCOTT.—On Nov. 2nd, at High-street, Musselburgh, Thomas Rennie Scott, M.D., aged 70.

SMITH.—On Nov. 3rd, at a nursing home in Blackheath, S.E., Henry Lionel Smith, J.P., M.R.C.P.Irel.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Comments, and Abstracts.

RADIOSCOPY AND RADIOTHERAPY.*

BY SIR HUMPHRY ROLLESTON, K.C.B., M.D. CAMB.,
PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT a time when financial stress is forcing many hospitals to close some of their wards it speaks well for the generosity of the Weymouth public and the energy of this hospital's authorities that to-day sees the addition of a wing for an expanded X ray department. This important improvement is appropriately dedicated to the memory of Dr. James Miller, who for 15 years devotedly served the poor of this hospital, and died within its walls on Nov. 9th, 1918, almost exactly five years ago, from lung complications of influenza. Like many unselfish men of his profession he neglected himself to care for others and went about his work with a temperature of 104° F., which he certainly would not have allowed any one else to do. Always willing to help in any capacity, generous and sympathetic, he was the friend of the poor, and did not let his light shine prominently before men; a genuine sportsman, he played the game for his side, never for his own hand. Often such a life has its only memorial in the gratitude, genuine though necessarily transient, of the poor; but his relations, colleagues, friends, and patients have rightly determined to perpetuate the good work he had silently carried out by erecting and equipping a new X ray department which bears the name of their beloved physician—The James Miller Memorial Wing. Among these benefactors of the hospital are his mother, Mrs. Miller, who gave £1000, members of the hospital staff who collected £700, Mrs. Sanderson-Wells and Mrs. C. Barrett, who got up two fêtes realising £1200 and £2000 for this pious object.

The Beginnings of X Ray Work.

Prof. W. K. v. Röntgen, of Würzburg, discovered X rays when working with a Crookes's high vacuum tube electrically excited, in November, 1895; and it was therefore a great Englishman, Sir William Crookes (1832–1919), whose work rendered this discovery possible. Röntgen died at Münich on Feb. 10th last in his seventy-eighth year, and thus had the satisfaction of seeing the enormous advances that his observation has rendered possible, not only in pure science but in its practical application, especially in the art of healing. Those who were in practice before radiology became the handmaiden of medicine and surgery know what a revolution has taken place in our means of accurately detecting disease. This is shown, perhaps as well as any detailed review would do, by the fact that an action for professional negligence has been brought against a medical man on the ground that he did not employ X rays in a case of possible fracture of a bone. Unlike many great advances in medicine, notably Lister's antiseptic method, the use of X rays was at once taken up most enthusiastically and, though its professional applications took some years to develop, on account of many technical difficulties, it was never neglected or opposed. In fact, within a week of the announcement of the discovery, Cox, in far-off Montreal, localised a bullet which for seven years had caused trouble in a patient's leg and so led to its extraction on the following day. First employed for the detection of fractures, foreign bodies, and calculi, X rays were in the same year (1896) applied by J. Macintyre, of Glasgow, to the diagnosis of intrathoracic disease, such as aneurysm; about ten years later pyelography came into vogue. That advances are constantly being made may be shown by a few examples; the introduction of gas into the abdominal, cranial, or even other cavities before an X ray picture is taken is now employed to define more clearly the position of a tumour, and Dr. R. W. A. Salmond [1] has shown how valuable the introduction of air into the pericardium—a previously unexploited region by this method—may possibly be in the detection of unusual and otherwise unrecognisable lesions; Prof. Jacobaeus's thoracoscopy with division of pleuritic adhesions under the X rays opens new possibilities in connexion with the treatment of pulmonary tuberculosis by artificial pneumothorax; Sicard's method of localising the level and extent of spinal fractures, adhesions, or tumours obstructing the intrathecal space by means of injection of lipiodol (a non-toxic solution of iodine in poppy-seed oil) before the spine is X rayed, now employed by him in 150 cases, [2] is a most promising aid to diagnosis; Mr. P. Sargent [3] was the first to report its use in this country; and Sicard's pupils, Jacques Forrestier and L. Leroux, [4] have applied it to the detection of pulmonary lesions such as bronchiectasis. The demonstration of gall-stones has been followed by that of other pathological changes in the gall-bladder; and the discovery, by Prof. Gösta Forsell, of Stockholm, that the mucous membrane of the gastro-intestinal tract undergoes active movements, apart from the coarser contractions of the muscular coat, and thereby controls the distribution and regulation of the contents, has physiological and pathological bearings as yet not recognised. As regards diagnosis, X rays have provided an additional sense or new eye, and their extension of the field of vision is comparable with the advance made when microscopic lenses and telescopes were first introduced. In the 28 years since X rays were discovered the mental attitude of clinical workers has gradually undergone a change, the magnitude of which is only realised when a medical man finds himself in some place where X rays are not available for help in a case of doubtful diagnosis.

X Ray Treatment.

X rays are not so widely employed or so well established in treatment as in diagnosis and, as has already been pointed out, it is mainly in regard to the latter that they have changed our outlook on medicine. In some skin diseases and superficial tumours their beneficial influence has been proved beyond question, and the autolytic effect of irradiations has been utilised in uterine fibromyomas, prostatic hypertrophy, erythræmia, exophthalmic goitre, metrorrhagia, lymphadenomatous and other enlargements of glands, and chronic tonsillitis, and good results in other affections may confidently be anticipated. But remedies powerful for good are not without risk when employed in large doses, and the dangers attaching to X rays are now fully recognised. Those most constantly in contact with irradiations are naturally most prone to suffer, and many pioneers of radiology, before the risks were fully realised, paid dearly for their devotion. It has been estimated that a hundred radiologists have died from X ray carcinoma of the skin; and that aplastic anæmia, chronic ill-health, and sterility may be produced in radiologists is too well known. It is therefore important that the recommendations of the X ray and Radium Protection Committee should be acted upon, and that all new X ray departments should be inspected from this point of view by the National Physical Laboratory, Teddington.

The chronic ill-effects of X rays and radium are naturally almost only seen in X ray workers, but after long exposures, especially the intensive exposures for hours originating from Erlangen for carcinoma, patients may be extremely ill with acute constitutional symptoms and even die; this is, fortunately, a rare accident, and as our knowledge increases precautions will render it even more so. This form of treatment is still on its trial, and should be exhaustively tested at large X ray departments under the supervision of whole-time radiologists before its adoption is accepted as a routine therapeutic method of all hospitals. In some cases rapid spread of malignant disease supervenes after radiation and thus recalls the increase in lymphadenoma sometimes noticed after surgical removal of some of the affected glands. This may be independent of radiation or operative interference, but the question whether radiation, especially in small doses short of lethal actior, stimulates the growth of cancer cells has been much discussed. In a review of this complex pathological question Ewing [5] concludes that the danger of stimulating the growth of tumours by the present methods of radiotherapy is extremely remote, and that the view that inadequate radiotherapy can endow the cells with increased vitality is quite unreasonable.

Important as a thoroughly complete and up-to-date equipment is, the first essential is that there should be a competent radiologist in charge of the department, and the Weymouth and District Hospital is most fortunate in having the services of Dr. Rodier Heath, who for 15 years has been the pioneer in this town, which thus provides an invaluable centre for radiological work.

A NEW SPECIES OF GERM.

Sheffield University has produced a new species of vibrio—an entirely non-pathogenic commensal organism. This germ takes the form of a little magazine, the *Vibrio*, grown on the culture medium of the University Medical Society. The journal is edited by a student committee, and the editors aim at creating an official organ "in which full reports of papers read before the society can be published, and in which much of the original work done in the Faculty of

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* Remarks made at the Opening Ceremony of the James Miller X Ray Wing of the Weymouth and District Hospital, Nov. 3rd, 1923.

[1] Salmond, R. W. A.: Proc. Roy. Soc. Med., 1923, xvi. (Electro-Therap. Section), 71.

[2] Sicard, Paraf, et Laplane: Presse méd., Paris, 1923, xxxi., 885.

[3] Sargent, P.: Brit. Med. Jour., 1923, ii., 174.

[4] Forrestier, J., et Leroux, L.: Jour. de radiol. et d'électrol., 1923, vii., 355.

[5] Ewing, James: Mutter Lecture—An Analysis of Radiotherapy in Cancer, Trans. Coll. Phys. of Philadelphia, 1922, 3rd ser., xliv., 203. Dr. R. Knox, who kindly drew my attention to this article, has also discussed this problem in a paper which will appear in the American Archives of Röntgenology for next January.

Medicine can be recorded." "Also," they add, "there must be many abnormal cases met with by students in hospital practice, cases which are worthy of record and which give scope for the explanation of students' difficulties; we hope that in future students will submit such cases for publication." If that hope is realised, the journal will be of great service to those students who are really interested in their work. The preparation of a case for publication (whether it appears in print or not), necessitating as it does a concise exposition of essential facts and the crystallisation of ideas, promotes clearness of thought and develops the writer's power to grasp the main issue. This is a training which the preparation of case reports for examination purposes does not give, for many students cannot disabuse themselves of the idea that examiners are impressed by flowery language and adventitious "padding"—the more pages of manuscript filled, the higher the marks. An editorial blue pencil, wisely wielded, is the best corrective for such tendencies.

The aims of the journal are rightly ambitious; they do not stop at recording original work done in the Faculty—original humour is also called for. We quote a promising sample, two stanzas of a "romance neurologique," entitled "Le Signe de Babinski":—

> Babinski turned his toes up
> When stroked beneath the sole,
> The doctors in attendance
> Remarked, "Mais! ça c'est drôle!"
> It puzzled them immensely,
> They'd always learned, and taught,
> That people turned their toes down
> When tickled. So they ought!
>
> * * *
>
> Babinski turned his toes up,
> As all of us now know,
> Because his upper neurones
> Had lost control below.
> The only normal people
> Who do the same as he,
> Are tiny little "babbies,"
> Until they're two or three.

The journal starts on its career appropriately with an interesting article on the history of the Sheffield Medical School by Prof. Arthur J. Hall, and there is a page of really helpful advice to the student who is about to begin his clinical work in the infirmary.

PUBLIC HEALTH IN SIERRA LEONE.

A REPORT on this Colony and Protectorate for the year 1922, signed by Mr. W. B. Stanley, Acting Colonial Secretary, has been presented to Parliament. It states that the number of European and American residents during 1922 was 1202, of whom 209 were officials, 292 military, and 701 non-officials. The population of the Colony and Protectorate, taken together, increased from 1,403,132 in 1911 to 1,541,311 in 1921, or approximately 9·8 per cent. The deaths of Europeans from climatic and non-climatic causes in 1922 numbered 13. The birth-rate in Freetown (the capital) was 16·9 and the death-rate 26·3 per 1000, the corresponding figures for the rest of the colony being 20·2 and 21·2 per 1000. According to the 1921 census the males exceeded the females by 28·5 per cent. in Freetown, and 24·3 per cent. in the rest of the colony. Owing to the non-registration of many births the available birth-rate is undoubtedly much below the actual. The preponderance of females in the Protectorate is again noticeable, the figures being 599,199 women and 421,173 men, but these figures, it is pointed out, are based on a very rough and ready calculation drawn from a small representative area in each district. The Colonial Hospital was completely destroyed by fire early in 1920, and, pending reconstruction, temporary accommodation had to be arranged. A portion of the new hospital was completed and opened in 1922. This new hospital includes three more blocks for Africans and one for Europeans, besides quarters for the resident surgeon and nursing sisters. Patients admitted during the year numbered 1269, and there were 120 deaths; 89 operations were performed; 10,573 out-patients were treated at the Colonial Hospital, 2282 at the Cline Town Dispensary, and 3235 at the Kissy Dispensary. At the Leper Asylum there were two patients at the beginning of the year; there were three admissions and one death. One case of small-pox and 37 cases of chicken-pox were admitted to the Infectious Diseases Hospital, of which one chicken-pox case died from senility. To the Nursing Home there were 126 admissions, 37 being Government officials; 55 were cases of malaria and four of blackwater fever; one official and six non-officials died. The climate is tropical, with a heavy rainfall and high atmospheric humidity during the greater part of the year. There is a single rainy season lasting roughly from May to the end of October. This constitutes the period of the south-west monsoon; it is preceded and followed by a period of thunderstorms known as tornadoes. July, August, and September are the months of heaviest rainfall. In December and January Sierra Leone comes into the region of the north-east trades, and the resultant wind, known as the "harmattan," blows from N.N.E.; it is an exceedingly dry wind, and is accompanied by a thick haze probably composed of minute particles of dust. During this period there are cool nights and hot days. The lowest mean temperatures are usually recorded in the months of July and August. There are facilities for playing cricket, football, tennis, and golf, and any European who wishes to play can get opportunities of doing so. The country is hilly, and cycling is in consequence laborious, and horses do not thrive, but for some distance out from Freetown the roads are good enough for motor-cars and motor-cycles to be used. The town enjoys a splendid pipe-borne water-supply, the catchment area being situated in the mountains, where there is a large reservation of land.

A POPULAR GUIDE TO TRAVEL.

WE have received the first fortnightly part of "The Outline of the World To-day," edited by Sir Harry Johnston and Dr. Haden Guest (George Newnes, Ltd., 13, Southampton-street, London, W.C. 2, 1*s.* 2*d.*). The Outline, which is to be completed in about 24 parts, aims at giving an impression of the life and attractions of other lands. "We never use our eyes until we are on foreign soil," writes Mr. E. V. Lucas, and the editors of the Outline realise that it is not possible for the majority of people who visit a new country to discover everything for themselves. The Outline is written by experts in travel, and is not so much a guide-book as "a philosopher and friend, ready to conduct readers over the globe without wearying them with cumbersome details." The first part deals with France as a whole, the land and the people, following on with a more detailed study of Normandy and Brittany, the form and manner of government, and a description of selected spots of special beauty and interest. Maps are provided which will render the work when complete a reference atlas of the world. The Outline appears opportunely when facilities for travel are slowly becoming more normal, while a healthy desire to see and observe habits and manners other than our own is growing up all around.

SUPERINTENDENT NEEDED FOR A CHILDREN'S PREVENTIVE HOME IN AUSTRIA.

AN advertisement appears this week in our columns for a resident lady superintendent with a good knowledge of the German language, to take charge of a British home for Austrian children. Schloss Grafenegg, near Liezen, where the home is situated, formerly the country seat of Baron Dumba, of Vienna, lies at an altitude of 2200 ft. on a wooded slope overlooking the valley of the Enns in Upper Styria. Owing to currency difficulties this home was on the point of being closed when it was taken over by the British Home for Austrian Children, Ltd., an association formed for the purpose. Prolonged malnutrition has seriously undermined the natural vitality of many children in Austria and the menace of tuberculosis is serious. Should a child on the first signs of disease be removed to healthy environment and properly fed under medical supervision, a definite cure follows almost as a matter of course, and the home is to be run on the lines of a preventorium rather than as a sanatorium proper. Parents are invited to contribute as much as they can afford, and it is intended to make the home self-supporting from the development of the farm as a pedigree stock centre. The qualifications required for the superintendent are good organising ability, knowledge of nursing, and some institutional experience, as well as a working knowledge of the language. Preference will be given to some one who has already worked or resided in the country.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

Surg.-Comdr. F. G. Wilson is placed on the ret. list.
Surg.-Lt. B. S. Collings to be Surg. Lt.-Comdr.
Surg.-Lt. N. A. H. Barlow to be Surg. Lt.-Comdr.

ROYAL ARMY MEDICAL CORPS.

Maj. A. C. Vidal is placed on the half-pay list on account of ill-health.

ROYAL AIR FORCE.

W. J. Hutchinson is granted a short service commission as a Flying Officer.

After the memorial service on Armistice Day, the Assistant Director of Medical Services (London District), and a detachment of the Royal Army Medical Corps, will deposit a wreath on the Royal Army Medical Corps war memorial tablet in Westminster Abbey.